

*THIRTY-NINTH ANNUAL CATALOGUE*

*OF THE*

*Officers, Students and Graduates*

*OF THE*

*KANSAS STATE*

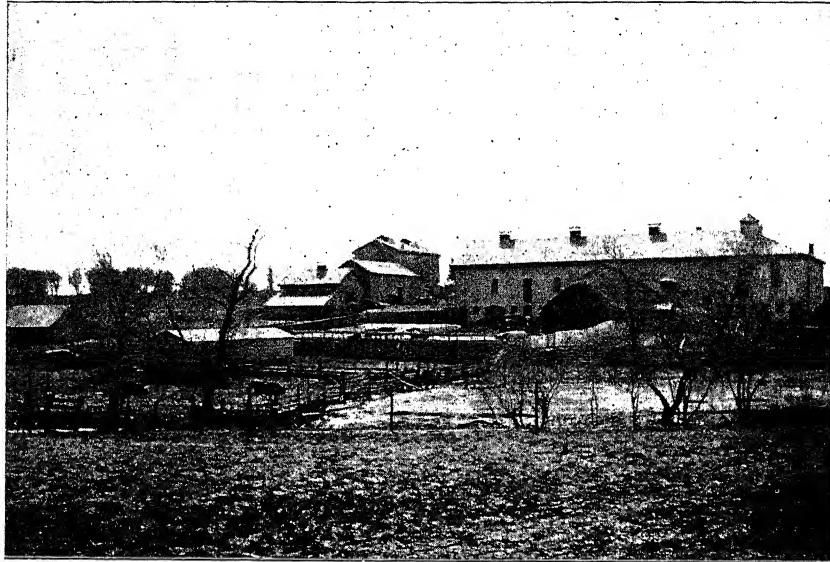
*Agricultural College*

*MANHATTAN,*

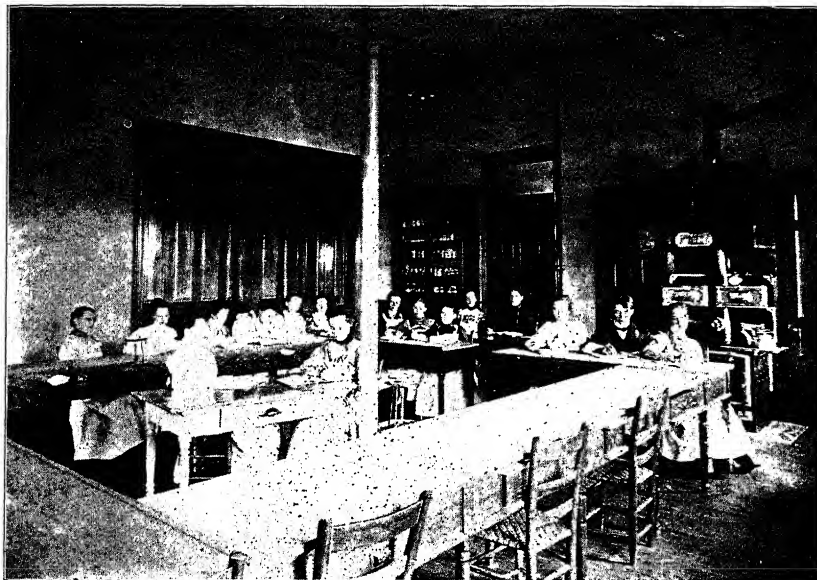
*1901-'02.*

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MANHATTAN, KANSAS.



BARN.



DOMESTIC SCIENCE LABORATORY.

## *Terms and Vacations.*

### *Fall Term, 1902, Thirteen Weeks.*

WEDNESDAY, SEPTEMBER 17.—Examination for admission, at nine A. M.  
THURSDAY, SEPTEMBER 18.—College year begins.  
TUESDAY, SEPTEMBER 30.—Short course in domestic science begins.  
SATURDAY, NOVEMBER 1.—Mid-term examination.  
THURSDAY AND FRIDAY, DECEMBER 18, 19.—Examination at close of term.

### *Winter Term, 1903, Twelve Weeks.*

MONDAY, JANUARY 5.—Examination for admission, at nine A. M.  
TUESDAY, JANUARY 6.—Winter term begins.  
TUESDAY, JANUARY 6.—Short courses in agriculture, horticulture and dairying begin.  
SATURDAY, JANUARY 24.—Annual inter-society oratorical contest.  
SATURDAY, FEBRUARY 14.—Mid-term examination.  
THURSDAY AND FRIDAY, MARCH 26, 27.—Examination at close of term.

### *Spring Term, 1903, Eleven Weeks.*

MONDAY, MARCH 30.—Examination for admission, at nine A. M.  
TUESDAY, MARCH 31.—Spring term begins.  
SATURDAY, MAY 9.—Mid-term examination.  
TUESDAY AND WEDNESDAY, JUNE 16, 17.—Examination at close of year.  
JUNE 14 TO 18.—Exercises of commencement week.  
THURSDAY JUNE 18, at ten A. M.—Commencement.  
JUNE 19 TO SEPTEMBER 16.—Summer vacation.

### *Fall Term, 1903.*

WEDNESDAY, SEPTEMBER 16.—Examination for admission, at nine A. M.  
THURSDAY, SEPTEMBER 17.—College year begins.

### *Board of Regents.*

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HON. J. S. McDOWELL (1905),\* *President*,  
Smith Center, Smith county.

HON. F. D. COBURN (1905), *Vice-president*,  
Kansas City, Wyandotte county.

HON. E. T. FAIRCHILD (1903), *Treasurer*,  
Ellsworth, Ellsworth county.

HON. WM. HUNTER (1903), *Loan Commissioner*,  
Blue Rapids, Marshall county.

HON. J. M. SATTERTHWAITE (1903),  
Douglass, Butler county.

HON. S. J. STEWART (1905),  
Humboldt, Allen county.

PRES. E. R. NICHOLS (*ex officio*), *Secretary*,  
Manhattan, Riley county.

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MISS LORENA E. CLEMONS, *Assistant Secretary*,  
Manhattan.

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\*Term expires.

## *Board of Instruction.*

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### *FACULTY.*

---

ERNEST R. NICHOLS, D. B. (Iowa State Normal School), A. M. (State University of Iowa),  
President.

JOHN D. WALTERS, M. S. (Kansas State Agricultural College),  
Professor of Industrial Art and Designing.

ALEXANDER B. BROWN (Boston Music School), A. M. (Olivet),  
Professor of Music.

JULIUS T. WILLARD, M. S. (Kansas State Agricultural College),  
Professor of Chemistry.

HENRY M. COTTRELL, M. S. (Kansas State Agricultural College),  
Professor of Agriculture, Superintendent of Farm.

EDWIN A. POPENOE, A. M. (Washburn),  
Professor of Entomology and Zoology, Curator of the Museum.

FRANK C. LOCKWOOD,<sup>a</sup> Ph. D. (Northwestern),  
Professor of English.

BENJAMIN L. REMICK, Ph. M. (Cornell College),  
Professor of Mathematics.

BENJAMIN F. EYER,<sup>b</sup>  
Professor of Physics and Electrical Engineering.

CHARLES E. GOODELL, A. M. (Franklin),  
Professor of History and Economics.

HERBERT F. ROBERTS, A. B. (University of Kansas), M. S. (Kansas State Agricultural College),  
Professor of Botany.

WILLIAM ARCH MCKEEVER, A. M. (University of Kansas),  
Professor of Philosophy.

MISS MARY E. BERRY (Kansas State Normal School),  
Professor of English.

LEON W. HARTMAN, A. M. (Cornell University),  
Professor of Physics and Electrical Engineering.

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<sup>a</sup> Absent on leave, 1901-'02, Middletown, Conn.

<sup>b</sup> Absent on leave, 1901-'02, Chicago, Ill.

## KANSAS STATE AGRICULTURAL COLLEGE.

WILFORD O. CLURE, B. O. (Drake University),  
Professor of Oratory.

EDMUND B. McCORMICK, S. B. (Massachusetts Institute of Technology),  
Professor of Mechanical Engineering, Superintendent of Shops.

DANIEL H. OTIS, M. S. (Kansas State Agricultural College),  
Professor of Dairy Husbandry.

Miss EDITH A. McINTYRE (Teachers' College),  
Professor of Domestic Science.

NELSON S. MAYO, M. S. (Michigan Agricultural College), D. V. S. (Chicago Veterinary College),  
Professor of Veterinary Science.

ALBERT DICKENS, M. S. (Kansas State Agricultural College),  
Acting Professor of Horticulture, Superintendent of Orchards and Gardens.

Miss HARRIET HOWELL (Pratt Institute),  
Superintendent of Domestic Art.

JOSHUA D. RICKMAN (I. T. U.),  
Superintendent of Printing.

BENJAMIN S. McFARLAND, A. M. (Miami),  
Principal Preparatory Department.

MRS. HENRIETTA W. CALVIN, B. S. (Kansas State Agricultural College),  
Librarian.

MRS. EDITH N. CLURE (Posse Gymnasium),  
Director of Physical Training.

Miss LORENA E. CLEMONS, B. S. (Kansas State Agricultural College),  
SECRETARY.

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*Assistants.*

Miss JOSEPHINE C. HARPER, A. M. (Lindsborg),  
Assistant Professor of Mathematics.

Miss ALICE RUPP (Indiana State Normal),  
Assistant Professor of English.

GEORGE F. WEIDA, Ph. D. (Johns Hopkins),  
Assistant Professor of Chemistry.

EDWIN H. WEBSTER, B. S. Ag. (Iowa State College), M. S. (Kansas State Agricultural College),  
Assistant Professor of Dairy Husbandry.

CHARLES EASTMAN,  
Cadet Major and Acting Commandant.

WILLIAM L. HOUSE,  
Foreman of Carpenter Shop.

MISS MARGARET J. MINIS, B. S. (Kansas State Agricultural College),  
Assistant Librarian.

ROBERT H. BROWN, B. M. (Kansas Conservatory of Music), B. S.  
(Kansas State Agricultural College),  
Assistant in Music.

WM. ANDERSON, B. S. (Kansas State Agricultural College),  
Assistant in Mathematics.

MISS GERTRUDE BARNES,  
Assistant Librarian.

WILLIAM BAXTER,  
Foreman of Greenhouse.

MISS MARY B. PRITNER, B. S. (Kansas State Agricultural College),  
Assistant in Domestic Science.

WILL M. SAWDON, B. S. (Purdue),  
Assistant in Mechanics.

MISS ADA RICE, B. S. (Kansas State Agricultural College),  
Assistant in Preparatory Department.

LOUIS WABNITZ,  
Foreman Iron Shops.

EVERED W. CURTIS (University of Wisconsin Dairy School),  
Instructor in Butter-making.

ALBERT T. KINSLEY, M. S. (Kansas State Agricultural College),  
Assistant in Veterinary Science.

MISS ELIZABETH J. AGNEW, B. S. (Kansas State Agricultural College),  
Assistant in Domestic Science.

JESSE B. NORTON,<sup>a</sup> M. S. (Kansas State Agricultural College),  
Assistant in Entomology.

ERNST C. GASSER,  
Foreman of Blacksmith Shop.

MISS INA E. HOLROYD, B. S. (Kansas State Agricultural College),  
(Kansas State Normal),  
Assistant in Preparatory Department.

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<sup>a</sup> Until March 1, 1902.

## KANSAS STATE AGRICULTURAL COLLEGE.

Miss MARIAN F. JONES, M. S. (Kansas State Agricultural College),  
Assistant in Domestic Art.

GEO. O. GREENE, B. S. (Kansas State Agricultural College),  
Assistant in Horticulture.

JOHN O. HAMILTON, B. S. (Chicago),  
Assistant in Physics.

Miss HETTY G. EVANS (Massachusetts Normal Art School),  
Assistant in Drawing.

VERNON M. SHOESMITH, B. S. (Michigan Agricultural College),  
Assistant in Agriculture.

Miss ELEANOR HARRIS, B. M. (Chicago College of Music),  
Assistant in Music.

F. CLARENCE WEBER, B. S. (Ohio State University),  
Assistant in Chemistry.

WALTER E. MATHEWSON, B. S. (Kansas State Agricultural College),  
Assistant in Chemistry.

Miss HELENA M. PINCOMB,<sup>a</sup> B. S. (Kansas State Agricultural College),  
Assistant in Domestic Art.

Miss MYRTLE MATHER,  
Assistant in Preparatory Department.

AMBROSE E. RIDENOUR, B. S. (Kansas State Agricultural College),  
Foreman in Foundry.

WILLIAM D. CRAMER, Pd. B. (Michigan Normal College),  
Assistant in Zoology.

GEO. A. DEAN,<sup>b</sup> B. S. (Kansas State Agricultural College),  
Assistant in Entomology.

LESLIE F. PAULL,<sup>c</sup> A. M. (Brown),  
Assistant in Botany.

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<sup>a</sup> Till January 1, 1902.

<sup>b</sup> Since March 1, 1902.

<sup>c</sup> Since April 14, 1902.

*Other Officers.*

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JACOB LUND, M. S. (Kansas State Agricultural College),  
Engineer.

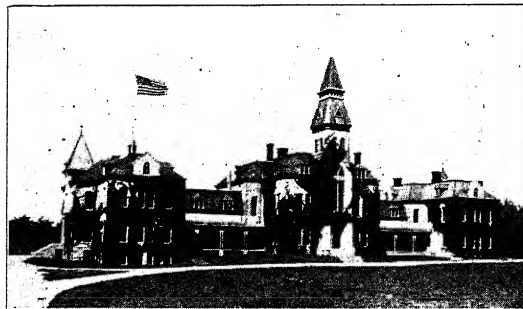
MISS C. JEANETTE PERRY, B. S. (Kansas State Agricultural College),  
Executive Clerk.

MISS MATILDA C. DOLL,  
Stenographer and Clerk

MISS MINERVA BLACHLY, B. S. (Kansas State Agricultural College),  
Bookkeeper.

WILLIAM R. LEWIS,  
Janitor.

CHARLES HUGHES,  
Secretary to President.



MAIN COLLEGE BUILDING.

## *Experiment Station.*

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### *Council.*

President NICHOLS, Chairman.  
Professor WILLARD, Chemist and Director.  
Professor COTTRELL, Agriculturist.  
Professor POPENOE, Entomologist.  
Professor ROBERTS, Botanist.  
Professor OTIS, Dairy Husbandman.  
Professor MAYO, Veterinarian.  
Professor DICKENS, Acting Horticulturist.

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### *Assistants.*

ALBERT T. KINSLEY, Assistant in Veterinary Science.  
JESSE B. NORTON,<sup>1</sup> Assistant in Entomology.  
GEO. O. GREENE, Assistant in Horticulture.  
VERNON M. SHOESMITH, Assistant in Agriculture.  
F. CLARENCE WEBER, Assistant in Chemistry.  
EDWIN H. WEBSTER,<sup>2</sup> Assistant in Dairying.  
GEO. A. DEAN,<sup>3</sup> Assistant in Entomology.  
LESLIE F. PAULL,<sup>4</sup> Assistant in Botany.  
Miss ALICE M. MELTON, Clerk in Director's Office.

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<sup>1</sup> Until March 1, 1902.

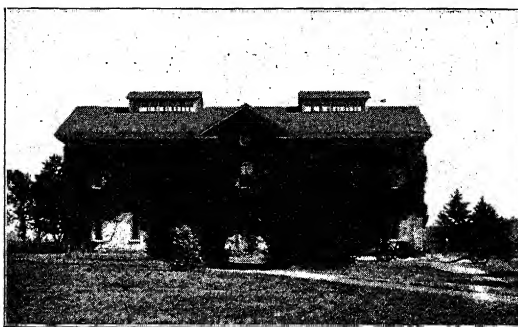
<sup>2</sup> Since October 21, 1901.

<sup>3</sup> Since March 1, 1902.

<sup>4</sup> Since April 14, 1902.

*Student Assistants.*

MAMIE ALEXANDER, Printing.  
R. F. BOURNE, Veterinary.  
MAY BOWEN, B. S., Mathematics.  
R. W. DEARMOND, Horticulture.  
L. A. FITZ, Botany.  
G. W. GASSER, Veterinary.  
C. A. GINGERY, Horticulture.  
HENRIETTA HOFER, Library.  
F. E. JOHNSON, Veterinary.  
JESSE M. JONES, Dairying.  
ANNA SMITH KINSLEY, B. S., Chemistry.  
HELEN KNOTMAN, B. S., Preparatory.  
ALICE LOOMIS, Preparatory.  
MADGE MCKEEN, B. S., Preparatory.  
RUTH MUDGE, B. S., Preparatory and Botany.  
R. A. OAKLEY, Botany.  
G. W. RANDALL, Foundry.  
ALEXIS REED, Library.  
JESSIE A. REYNOLDS, Preparatory.  
J. C. RICKMAN, Printing.  
FLORENCE RITCHIE, Preparatory.  
E. N. RODELL, Printing.  
A. H. SANDERSON, Surveying.  
G. B. SCANLAND, Foundry.  
CLARA SPILMAN, B. S., English.  
HELEN THOMPSON, Mathematics.  
C. C. WINSLER, Dairying.



ARMORY.

### *The College Battalion.*

The following is the roster of the commissioned and non-commissioned officers of the Kansas State Agricultural College corps of cadets for 1901-'02:

CHARLES EASTMAN,  
Major, and Commandant of Cadets.

#### STAFF.

ORRIN P. DRAKE.....First Lieutenant and Battalion Adjutant.  
RICHARD F. BOURNE.....First Lieutenant and Battalion Quartermaster.  
JAMES H. WHIPPLE.....Battalion Sergeant-major.  
WALTER O. GRAY.....Battalion Quartermaster Sergeant.  
FRANK A. BLAKSLER.....Color Sergeant.

#### INFANTRY, BY COMPANIES.

RANK.	"A" company.	"B" company.	"C" company.	"D" company.
Captain.....	J. F. Ross.....	G. R. Shepherd..	M. S. Cole.....	R. B. Mullen.
First Lieutenant...	A. H. Sanderson..	A. H. Leidigh....	H. A. Avery.....	C. W. McKeen.
Second Lieutenant,	A. M. Nash.....	D. V. Corbin.....	A. L. Hallsted....	R. W. DeArmond.
First Sergeant.....	E. C. Gardner....	T. L. Pittman....	L. C. Chase.....	T. E. Dial.
Second Sergeant...	A. D. Colliver....	V. L. Cory.....	Glen Edgerton...	Alf. Gallup.
Third Sergeant.....	C. O. Duehn.....	P. A. Cooley.....	L. C. Foster.....	W. G. Tellin.
Fourth Sergeant...	L. R. Parkerson..	P. M. Biddison...	C. J. Axtell.....	M. L. Haskell.
Fifth Sergeant....	F. C. Romig.....	W. J. Wilkinson..	O. A. Hanson.....	H. Tracy.
First Corporal.....	F. L. Courter....	W. L. Cropper....	R. Reece.....	G. H. Brown.
Second Corporal...	L. E. Klein.....	C. A. Maus.....	L. Burns.....	N. S. Gall.
Third Corporal.....	J. G. Chitty.....	R. M. McKee.....	M. S. Spencer....	A. F. Cassell.
Fourth Corporal...	J. L. Rogers.....	C. P. Blachly....	F. E. Balmer....	M. A. Pierce.
Fifth Corporal.....	W. B. Banning...	J. G. Savage.....	H. C. White.....	A. S. Stauffer.
Sixth Corporal.....	A. N. H. Beeman,	H. A. Smith.....	W. P. Terrell....	C. B. Thumble.

### *The College Band.*

The following is the roll of the College band for 1901-'02:

A. B. BROWN, DIRECTOR.

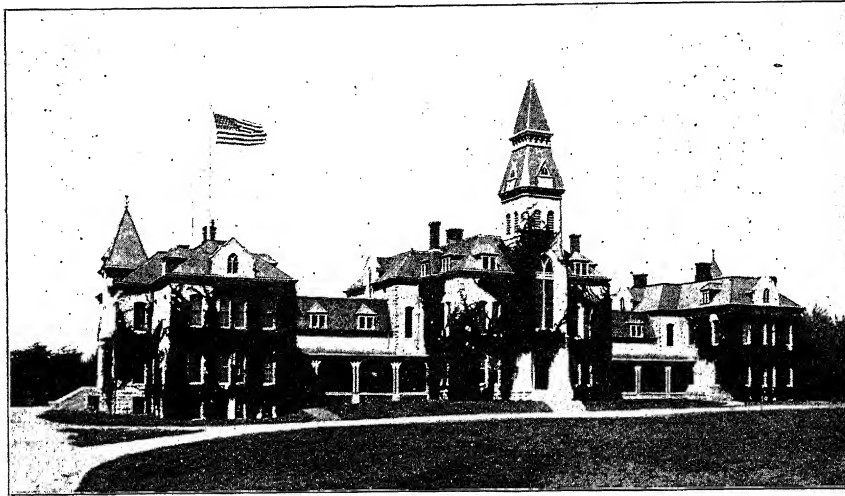
R. H. BROWN, Leader. F. W. WILSON, Drum Major.

*Sergeants:* A. D. BROWN, G. FOCKELE, B. R. JACKSON.

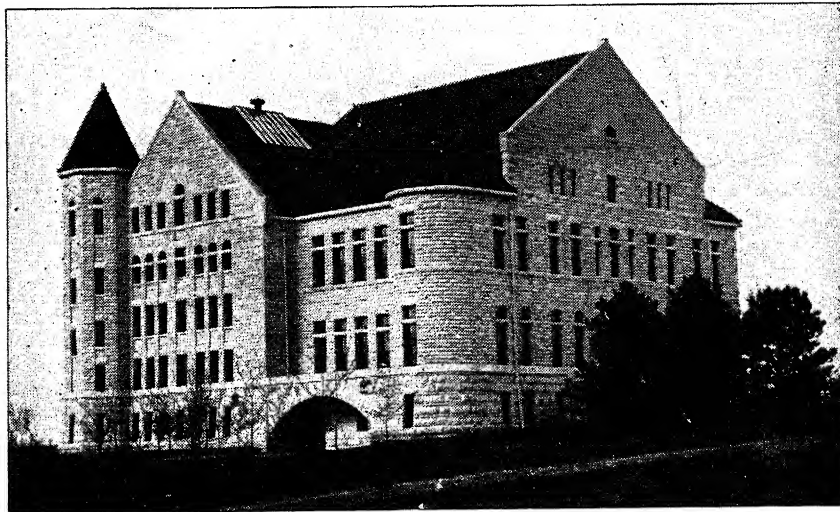
*Corporals:* E. M. AMOS, C. M. MILLER, F. PLEASANT,  
A. J. RHODES, P. WINNIE.

NAME.	Instrument.	NAME.	Instrument.
Amos, E. M.....	Tuba.	Brown, R. H.....	Cornet.
Lyman, Wm.....	"	Clark, C.....	"
Pendelton, F.....	"	Gardinier, H. P.....	"
Swift, C. B.....	"	Hutchinson, G.....	"
Albrecht, A. H.....	Tenor.	Johnson, A. S.....	"
Beck, J. J.....	"	Matthews, H.....	"
House, E. W.....	"	Matthews, V.....	"
Judd, H.....	"	Pleasant, F.....	"
Skow, G. W.....	"	Wright, G. L.....	"
Spuhler, H.....	"	Yerkes, G. E.....	"
Walters, F. H.....	"	Brown, A. D.....	Clarinet.
Wolfe, G.....	"	Bender, L. B.....	"
Jackson, B. R.....	Baritone.	Bliss, G. L.....	"
Legere, C.....	"	Fockele, G.....	"
Martin, H. R.....	Slide.	Johnson, C. B.....	"
Rhodes, A. J.....	Trombone.	Sprague, E. E.....	"
Wilson, F. W.....	"	Woodruff, F.....	"
Smith, O. H.....	French horn.	Wilson, J. T.....	Piccalo.
Dubach, A. B.....	Alto.	Baxter, E. M.....	Drums and
Fielding, L.....	"	Miller, C. M.....	Cymbals.
Hess, H. P.....	"	Hancock A. V.....	"
Loomis, H.....	"	Paine, R. R.....	"
Posey, W. N.....	"	Winnie, P.....	"
Souders, G.....	"	Withington, C. H.....	"
Ulrich, H.....	"		

Total, 50.



MAIN COLLEGE BUILDING.



LIBRARY AND AGRICULTURAL SCIENCE HALL.

## *History and Resources.*

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THE income of the College is derived from two sources—national and state. The original land-grant act was signed by President Lincoln July 2, 1862. This act appropriated 30,000 acres of land for each senator and representative in Congress. Under the provisions of this act this state was to receive 90,000 acres. The amount actually received was 82,313.52. This land was to be sold and the proceeds to be a permanent endowment, to be invested in bonds bearing not less than five per cent. interest, the income from these bonds to be used for the support of at least one college in each state. The second provision of section 5 reads as follows: "No portion of said fund, nor interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation or repair of any building or buildings." The amount of this endowment is \$503,848. This has been increasing until recently, on account of buying bonds below par. The income derived from this endowment since 1880 is given in the column headed "Income Fund," page 16.

Under this act, the state of Kansas, in 1863, established the State Agricultural College, by endowing Bluemont College, which had been erected two miles from Manhattan, under the auspices of the Methodist Episcopal church, but was presented to the state for the purpose named in the act of Congress.

In 1873 the College was reorganized upon a thoroughly industrial basis, with prominence given to practical agriculture and related sciences; and in 1875 the furniture and apparatus of the College were moved to the farm of 223 acres, one mile from the city of Manhattan.

In March, 1887, Congress passed the so-called "Hatch bill," which provided for the organization in each state of a station for agricultural experiments, and gave to each an annual appropriation of \$15,000 for this purpose. See "Experiment Station," page 21.

On August 30, 1890, another act was passed by Congress, known as the "college-aid bill," or "Morrill bill." It provided for an annual appropriation, beginning with \$15,000 for year ending June 30, 1890, with an annual increase for ten years of \$1000 over the preceding year, the annual amount thereafter to each state to be \$25,000. This money is "to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural and economic sciences, with especial reference to their applications in the industries of life and to the facilities for such instruction."

TABULATED FINANCIAL EXHIBIT.

FISCAL YEAR.	STATE APPROPRIATIONS.							NATIONAL APPROPRIATIONS.			Expense.....	Inventory increase.....	Total.....	Buildings.....	Equipment.....	Library.....	Repairs.....	Regents, etc.....	Water and coal..	Current expense.	Miscellaneous...	Enrolment.....	Graduates.....
	Miscellaneous...	Current expense.	Water and coal..	Regents, etc.....	Repairs.....	Library.....	Equipment.....	Buildings.....	Total.....	Income fund.....	Morrill fund.....	Hatch fund.....											
1893-90.....	\$17,979 <sup>1</sup>	.....	.....	\$1,251	\$800	.....	\$1,950	\$45,645	\$155,302	\$86,009	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1890-91.....	.....	.....	.....	1,398	.....	.....	.....	15,000	17,398	3,316	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1891-92.....	.....	.....	.....	1,864	.....	.....	.....	15,000	17,864	19,784	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1892-93.....	.....	.....	.....	1,415	500	.....	500	7,500	10,415	12,295	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1893-94.....	.....	.....	.....	1,637	700	.....	500	10,000	13,137	37,105	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1894-95.....	4,613 <sup>1</sup>	.....	.....	1,798	.....	.....	600	10,000	12,098	34,721	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1895-96.....	.....	.....	.....	1,733	1,400	.....	.....	8,817	7,233	12,910	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1896-97.....	2,254 <sup>1</sup>	.....	.....	2,047	1,000	.....	4,700	1,000	17,564	16,597	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1897-98.....	.....	.....	.....	1,815	1,000	.....	2,500	1,000	9,315	8,732	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1898-99.....	3,000 <sup>2</sup>	.....	.....	3,410	1,900	.....	2,900	1,000	10,209	10,334	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1899-90.....	.....	.....	.....	1,649	1,200	.....	2,950	4,000	12,323	15,219	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1900-91.....	3,000 <sup>2</sup>	.....	.....	3,410	1,200	.....	2,950	4,000	12,323	15,219	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1901-92.....	.....	.....	.....	1,698	3,050	.....	.....	.....	18,381	18,381	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1902-93.....	.....	.....	.....	456	1,500	.....	.....	.....	75,821	79,846	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903-94.....	.....	.....	.....	116	1,000	.....	.....	.....	2,295	54,989	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1904-95.....	1,625 <sup>3</sup>	.....	.....	1,995	4,300	.....	5,057	2,000	17,453	51,556	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1905-96.....	.....	.....	.....	1,907	1,300	.....	.....	3,480	18,141	51,928	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1906-97.....	.....	.....	.....	1,656	1,700	.....	3,200	16,599	31,584	25,988	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1907-98.....	629 <sup>4</sup>	.....	.....	1,700	1,000	.....	.....	.....	16,171	29,390	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1908-99.....	.....	.....	.....	1,700	1,000	.....	.....	.....	10,750	29,669	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1909-1900.....	.....	.....	.....	1,850	3,000	.....	22,240	43,500	91,700	27,677	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1900-01.....	7,360 <sup>5</sup>	.....	.....	1,850	3,000	.....	9,100	75,000	122,380	25,160	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1901-02.....	18,993 <sup>5</sup>	.....	.....	1,850	3,000	.....	8,500	10,000	37,598	30,910	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1902-03.....	4,130 <sup>7</sup>	.....	.....	1,850	3,000	.....	8,500	10,000	61,780	25,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	.....	1,850	3,000	.....	8,500	10,000	\$792,287	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> To restore endowment (not included in totals).<sup>2</sup> Water mains and sewer.<sup>3</sup> \$1500 cadet uniforms, \$125 sewers.<sup>4</sup> Rent, President's house.<sup>5</sup> \$2000 Farmers' Institutes, \$1800 salary State Veterinarian, \$3000 sewer,

\$560 rent President's house.

<sup>6</sup> \$2000 Farmers' Institutes, \$1800 salary State Veterinarian, \$300 rent President's house, \$14,893 deficiency June 30, 1899.<sup>7</sup> \$2000 Farmers' Institutes, \$1800 salary State Veterinarian, \$330 rent President's house.

## *Grounds and Buildings.*

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THE College grounds and buildings, occupying an elevation at the western limits of the city of Manhattan, and facing toward the city, are beautiful in location. The grounds include an irregular plat in the midst of a fine farm, with orchard, vineyard and sample gardens attached, the whole being surrounded by durable stone walls. The grounds are tastefully laid out and extensively planted, according to the design of a professional landscape-gardener, while well-graveled drives and good walks lead to the various buildings. All these are of the famed Manhattan limestone, of simple but neat styles of architecture, and admirably suited to their use. All recitation rooms are excellently lighted and ventilated, and are all heated by steam or hot water. A complete system of sewerage has been provided. The College owns 323 acres of land, valued at \$39,700, and leases 221 acres additional. The greater portion of these 544 acres is devoted to experiments.

THE MAIN COLLEGE BUILDING, 152x250 feet in extreme dimensions, is arranged in three distinct structures, with connecting corridors. This building contains, in its two stories and basement, offices of the President and Secretary, cloak-rooms, studies, chapel, post-office, and offices and classrooms of the departments of drawing, music, mathematics, oratory, English, philosophy, preparatory, and printing. Cost, \$79,000. The value of equipment and apparatus in this building is as follows: Executive, \$5323; drawing, \$2395; music, \$1315; mathematics, \$1598; oratory, \$45; English, \$93; preparatory, \$36; printing, \$2451.

MECHANICS HALL contains the following rooms, forming a connected structure: Wood shop, two stories, 40x103 feet. The upper floor contains offices and classrooms for the department of mechanical engineering. The lower floor contains benches for 220 students, and complete set of wood-working machinery and tools. Machine shops, 40x80 feet; blacksmith shop, 40x50 feet; iron foundry 40x50 feet; brass foundry, 16x30 feet; pipe-fitting room, 18x50 feet; engineering laboratory, 35x40 feet; power room, 35x40 feet; boiler room, 40x75 feet. Cost of buildings, \$23,125; value of equipment, \$36,341.

GYMNASIUM, one story, 35x110 and 46x75 feet of floor space, is in form of a cross. It contains a drill-room 43x71 feet, a large class-

room, cloak-room, dressing-room, toilet room, ten bath-rooms, and two offices. Cost, \$10,000. Value of equipment, \$329.

HORTICULTURAL HALL, 32x80 feet, is a one-story building with cellar, having museum, classroom, and storage, with greenhouses attached. Cost of building was \$4200; value of equipment and apparatus is \$18,741.

HORTICULTURAL LABORATORY contains offices, workroom, five propagating houses, and insectary. Cost, \$5000.

ARMORY, 46x95 feet, is a two-story building. This building, which has served many purposes, is now fitted below for an armory and drill-room and office of military department; also dressing-room and bath-room for the various athletic teams; and above are classrooms, laboratories, offices and museum of the veterinary department. Cost of building, \$11,250. Value of equipment and apparatus: Military, \$1407; veterinary, \$5103.

LIBRARY AND AGRICULTURAL SCIENCE HALL is 100x140 feet, three and four stories high. This building provides permanent quarters for the library, with ample reading-rooms and offices, classrooms and laboratories for the departments of botany, entomology and zoölogy, and bacteriology, a classroom and office for the department of history and economics, general museum, and rooms for the various literary societies. Cost of building, \$67,750. Value of equipment and apparatus: Botany, \$13,281; history and economics, \$232; entomology and zoölogy, \$10,302.

DOMESTIC SCIENCE HALL is 84x70 feet, two stories and basement. The first floor contains office, lecture-rooms and laboratories for the department of domestic science. The second floor is occupied by the department of domestic art. Cost of building, \$15,000. Value of apparatus: Domestic science, \$1209; domestic art, \$572.

AGRICULTURAL HALL, 90x95 feet, with its two stories and basement, contains offices, classrooms and laboratories for the departments of agriculture and dairy husbandry. It is well equipped with modern improved machinery for butter- and cheese-making, milk-testing, etc. All the workrooms are lined with opalite tiling. Cost, \$25,000; equipment and apparatus, \$21,099.

PHYSICAL SCIENCE HALL is 96x166 feet, and its two stories and basement contain offices, classrooms and laboratories for the departments of chemistry, and physics and electrical engineering. It is heated both by direct and indirect radiation, thus insuring perfect ventilation. Cost of building, \$70,000. Value of equipment: Chemistry, \$5125; physics and electrical engineering, \$3842.

THE FARM BARN is a double but connected stone structure, 50x75 feet and 48x96 feet, with an addition of sheds and experimental pens 40x50 feet. The south wing, 48x96 feet, is the stock-judging room, having a seating capacity of 350. A basement, having stalls for seventy-five head of cattle, silos, motor-room, and granaries, underlies the entire structure. Cost, \$10,831.

THE DAIRY BARN, 40x175 feet, is fitted up with modern swinging stalls for eighty head of cows, arranged in two rows, with driveway between. Cost of building, \$3000.

THE HORTICULTURAL BARN is a stone building, containing store-room, granary, and stables for several horses. Cost, \$1000.

THE COLLEGE LIBRARY is one of the most important supplements to classroom instruction. It consists of 25,700 bound volumes and about 18,000 pamphlets. These books are mainly kept in a general library, but many volumes of technical character are withdrawn and held in departmental libraries. All of the books are indexed in card catalogues, which show their author, title, and to a large degree the details of their contents; also their location. Students are allowed free access to the shelves, a privilege and a source of culture that is given in perhaps no other library of its size in the country. Students may draw books for home use under simple and liberal regulations. The library is open daily, except on legal holidays, from seven A. M. to six P. M.; and the librarian or an assistant is in constant attendance during this period to assist those who use the books. By all these means the library is utilized to the fullest extent and is of inestimable value.

The College subscribes for the leading literary, scientific and agricultural journals, while the principal daily and weekly papers of Kansas, and many from other states, are received in exchange for the College publications. All these are kept on file for the use of students and Faculty. The College has been designated as the depository of United States public documents for the fifth congressional district of Kansas, and 3000 volumes have already been received on this account. Value of books and equipment, \$49,707.

## *Objects.*

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This College now accomplishes the objects of its endowment in several ways :

*First*, It gives a substantial education to men and women. Such general information and discipline of mind and character as help to make intelligent and useful citizens are offered in all its departments, while the students are kept in sympathy with the callings of the people.

*Second*, It teaches the sciences applied to the various industries of farm, shop, and home. Chemistry, physics, botany, entomology, zoölogy and mechanics are made prominent means of education to quick observation and accurate judgment. Careful study of the minerals, plants and animals themselves illustrates and fixes the daily lessons. At the same time lessons in agriculture, horticulture, engineering and household economy show the application of science ; and all are enforced by actual experiment.

*Third*, It trains in the elements of the arts themselves, and imparts such skill as to make the hands ready instruments of thoughtful brains. The drill of the shops, gardens, farm and household departments is made a part of the general education for usefulness, and insures a means of living to all who make good use of it. At the same time it preserves habits of industry and manual exertion, and cultivates a taste for rural and domestic pursuits.

*Fourth*, It seeks to extend the influence of knowledge in practical affairs beyond the College itself. For this purpose, farmers' institutes have been organized in nearly every county of the state, in which from one to three members of the Faculty share with the people in lectures, essays and discussions upon topics of most interest to farmers and their families. These institutes have brought the College into direct sympathy with the people and their work, so as to make possible a general dissemination of the truths presented. Members of the Faculty are also prominently connected with the state associations for the promotion of agriculture, horticulture, the natural sciences, and education in general. Correspondence as to farmers' institutes or any questions of practical interest in agriculture or related sciences is desired.

The *Industrialist*, published by the College and edited by the Faculty, gives a wide circulation to matters of interest in the College.

## THE EXPERIMENT STATION.

The Agricultural Experiment Station of the College is organized and maintained under the provisions of what is known as the "Hatch act," and is officially designated as "An act to establish agricultural experiment stations in connection with the colleges established in the several states under the provisions of an act approved July 2, 1862, and the acts supplementary thereto." This was enacted "in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and practice of agricultural science." The law specifies in detail "that it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and waters; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses for forage-plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable."

The Experiment Station, so established, is an important feature of the College. The President of the College, with the professors of agriculture, botany, chemistry, dairy husbandry, horticulture, entomology, and veterinary science, form the Experiment Station Council, by the authority of which experiments are undertaken, and carried on in the several departments under the supervision of the professors. The heads of certain important departments of instruction in the College are thus also in charge of the several departments of investigation of the Station, and to a certain extent assistants serve in both capacities. The Experiment Station, therefore, is not definitely localized at the institution, but its work and property are more or less woven in with that of the College. The expenses of the Experiment Station work are separately accounted for, however, and its property is listed in separate inventories. While this arrangement involves some difficulties, it also possesses many advantages—advantages which are mutual. The College work profits by having the investigations of the Station

going on alongside. The Station profits in that it thus obtains, without charge, the use of the College farm, buildings, heat, light, and use of various collections, museums, and in some cases apparatus. The expenses of the Experiment Station are met by an appropriation by Congress of \$15,000 per annum. The aims of the Station may be said to be twofold—those which lead to immediate returns, and those the object of which can be reached only after a series of years. Experiments of the greatest value are often of the latter kind, but if the work of the Station were limited to such, the public would feel that nothing is being accomplished. It is the intention of the Station force to make all of its experiments practical, in the sense that they lead to results which, indirectly if not directly, benefit the agricultural interests of the country.

The Hatch act provides “that bulletins or reports of progress shall be published at least once in three months, one copy of which shall be sent to each newspaper in the states or territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same, and as far as the means of the Station will permit.” The publications of the Station include annual reports, bulletins, and press bulletins.

Since 1889 the annual reports contain no details of experiments, but simply outlines of the work of the year in general and in the several departments, and including the financial statements required by law. These annual reports, not being of general interest, therefore, are printed in but small numbers, and sent to libraries and officials only, except on special request.

The bulletins are the means of communicating the results of the Station work directly to the farmers. They are issued in the quantities judged necessary to meet the demand. All investigations are described in them when completed, and they are sent to all on our mailing lists. During the history of the Station the number issued has averaged about eight per annum.

The press bulletins are issued in limited numbers and sent to the papers, to certain state and county officers, and to a considerable number of public or semi-public institutions. They are short, readable, and popular, but at the same time accurate, articles on subjects of current interest, and embodying observations and experiments of members of the Station staff. Extra copies of some of them are printed for use in answering inquiries.

Persons desiring to receive the Station bulletins are requested to address Agricultural Experiment Station, Manhattan, Kan. General correspondence in reference to the Station should be sent in the same

way, but inquiries concerning any special line of investigation should be sent to the head of the department in charge of such work.

FORT HAYS BRANCH STATION.—Congress, in an act approved March 27, 1900, ceded the Fort Hays military reservation, containing 7,597.93 acres, to the state of Kansas, on condition that it would establish and maintain there branches of the State Normal School and of the Experiment Station. The state legislature accepted the reservation in an act approved February 7, 1901, and designated a division of the land between the Normal School and the Agricultural College, by which the latter obtained about 3500 acres, including the parts most desirable for agricultural purposes. Situated west of the ninety-ninth meridian, the station will occupy a field entirely different climatically from that of any other station in the country, and the results obtained there ought to benefit a large region, extending even beyond the boundaries of the state. Experiments will be tried on a large scale in making tests of varieties and methods of culture, with special reference to the needs of regions with deficient rainfall. Experiments will be made to determine the feeding value of the drought-resisting crops produced. Experiments with crops, but principally upon sod, were begun this spring. This branch station is supported by a state appropriation. The funds appropriated by Congress cannot be used for the support of substations.

#### INDUSTRIAL TRAINING.

This institution is preëminently industrial in its aims, methods, and tendencies. While the pure sciences, mathematics and other studies are rigorously taught, there is constantly present a practical atmosphere which incites the student to an application of the principles taught, and thus lends interest and value to the work. In nearly every term of the four-year course the student gives one hour per day to industrial training of one kind or another. This awakens and deepens sympathy with industry and toil, impresses the student with the essential dignity of labor, thus educating toward the industries instead of away from them, and lays a good foundation for a life-work in industrial and technical lines. Even should students not all return to the farm, the shop, or to housewifery, the wider knowledge afforded them and the broader sympathies engendered cannot but redound to their good, and to the advantage of society at large and the industrial classes in particular.

Throughout the first year young men take their industrial in the shops. They thus get a familiarity with tools and methods which enables them to do the wood- and ironwork commonly needed on the farm, and which is useful to all everywhere. The young women take sewing during the first year, and a certain amount of cooking practice.

The utility of this needs no argument. After the first year there are differences in the industrial requirements corresponding to differences in the several courses of study. In the domestic science course the various lines of household art constitute almost the entire industrial work, floriculture being given one term and another being open to choice. In the mechanical engineering course shop work in one or another of its various kinds is required every term. In the agriculture course the industrials include practical instruction in the fields, orchards, gardens, and dairy, and in feeding. The general science course offers more latitude in choice of industrials after the second year. Young women may take sewing, cooking, printing, floriculture, or music. Young men may have woodwork, ironwork, dairying, farming, gardening, fruit-growing, or printing. The availability of these industrials depends somewhat on the season in some cases, so that not all are open each term. In addition to the above, a limited number of students are allowed typewriting as the industrial, upon recommendation of the head of a department having a machine.

The labor of students during assigned industrial time is not paid for, as its object is educational, and the student receives full value in the training afforded. In all the instruction in industrial lines special attention is given to making the courses systematic and progressive. Students desiring to give extra attention to such work are allowed every opportunity that the departments can afford. Many students acquire sufficient proficiency to be able to turn their skill to a financial advantage during the later terms of their courses, and all who apply themselves with any diligence obtain a training that cannot fail to be of great benefit to them in after-life. The work of the several industrials will be found described in detail under the individual headings.

#### EXTENDED COURSE.

Considering the entrance requirements of the institution, the four-year course of study is brief. Where practicable, students are advised to extend their course to five years. For students desiring to do this, additional work will be arranged in departments in which they may desire to specialize. Work done in the extended course may receive special mention on the diploma and be counted against requirements for the second degree.

#### SPECIAL COURSES.

Persons of suitable age and advancement, who desire to pursue such branches of study as are most directly related to agriculture or other industries, may select such studies, under the advice of the Faculty.

## GRADUATE COURSES.

Arrangements can be made for advanced study in the several departments at any time, and outlines of courses will be furnished on application. The electives of the extended course are open to graduates, and special opportunities will be given for investigation and research. Every facility for advancement in the several arts taught at the College will be afforded such students, though they are not required to pursue industrial training while in these courses.

## DEGREES.

The degree of bachelor of science is conferred upon students who complete the full course of four years and sustain all the examinations: This degree entitles the holder to credit for studies pursued in any application for state teachers' certificate. (See Laws of 1893.)

Students who extend the course one full year will receive mention on the diploma of special proficiency in those lines of study which they have pursued as an elective for not less than three terms.

The degree of master of science will be conferred in course upon graduates of the College who have received eighteen credits in an approved graduate course, each credit being equivalent to a full study pursued for three months.

Courses will be approved which are in line with any one of the regular undergraduate courses, and include at least six credits in the biological or the physical sciences, or mathematics, and at least six credits in technical or industrial branches.

The principal line of study shall be designated as the major, and another line as the minor study. As nearly as may be, one-third of the time is to be given to the minor and two-thirds to the major study, including in the latter such scientific, mathematical or technical branches as contribute directly to it. The minor study must fill a logical place in the scheme, so that the work as a whole may possess unity.

Applications for graduate study shall be passed upon by the committee on graduate courses and referred by them to the Faculty for action. If approved by the Faculty, the candidate shall obtain an assignment at the beginning of each term for the studies intended to be pursued during the ensuing term. At the close of each term, examinations shall be given in all branches, and the candidate shall be reported as "passed" or "not passed."

Applications for entrance upon graduate study and for changes in major or minor subjects must be presented to the committee on graduate courses within the first week of a College term.

Non-resident candidates will be required to send to the professors in charge of the departments of their major and minor subjects a full

and complete report at the middle and end of each term of the work accomplished within that period. Failure to comply with this requirement will cause the candidate to be dropped from the roll of graduate students, to be reinstated only upon approval of the Faculty. At the end of each term, at the option of the instructors, and at a time and place to be designated by them, an examination may be given to non-resident candidates in the major and minor subjects.

Upon the completion of the required work, and by the 15th day of May of the year in which the degree is desired, each candidate shall present to the committee on graduate courses, typewritten and in duplicate, a satisfactory thesis involving original work along the line of his major subject. Thereupon a special examining committee of three shall be appointed from the Faculty, of whom one member shall represent the major subject and another the minor, who shall examine the candidate orally on the subject-matter of his thesis, and report the result of such examination to the Faculty. Upon receipt of the report of this committee, the Faculty will take action concerning the recommendation of the candidate for the degree.

The subject of the thesis must be presented to the committee on graduate courses for approval by the 1st day of January preceding the commencement at which the degree is desired.

Outlines of direction for study and research in various arts and sciences, with special adaptation to the wants and opportunities of individual applicants, will be furnished, at request, to all graduates; and professors in charge will gladly aid by correspondence in any researches undertaken.

The degree of master of science may be conferred upon the graduates of other colleges of like grade with our own, provided the applicant shall first satisfy the Faculty of his proficiency in the industrial studies distinctive of this institution, on the following conditions:

1. The applicant for the master's degree must be a graduate of at least three years' standing, and a resident of Kansas.
2. His graduate study shall have been in line with that required of graduates of this College, as published in our catalogue.
3. He must make application for the degree on or before the 1st day of January preceding the granting of the same. The application must be accompanied with a statement of his course of study, the work upon which the claim for the degree is based, and the subject selected for his thesis.
4. By April 1, an abstract of the thesis must be submitted to the Faculty.
5. Before May 15, the applicant shall present himself for examination. The examination shall be thorough and extensive, and shall be conducted by a special committee of the Faculty.

## COURSES OF STUDY.

With a view of providing for the wants of the various classes of students, the following courses of study are offered:

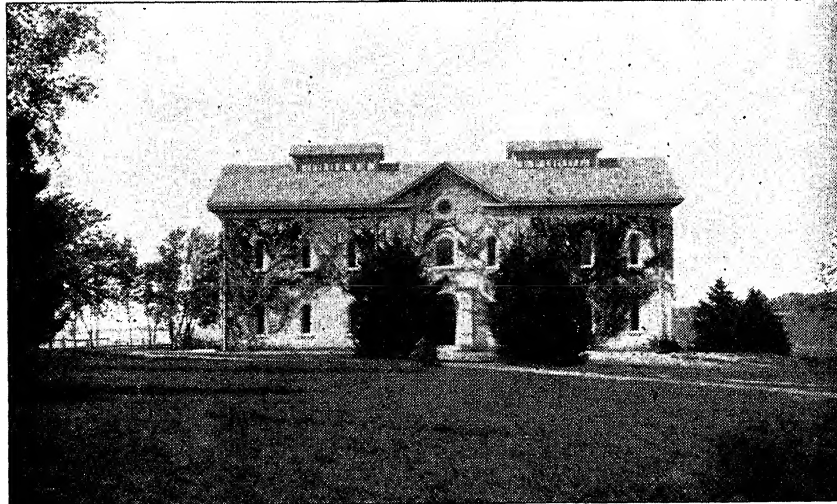
1. Four-year courses, each leading to the degree of bachelor of science: (*a*) General science; (*b*) agriculture; (*c*) domestic science; (*d*) mechanical engineering; (*e*) electrical engineering.

2. Short courses in (*a*) dairying, (*b*) domestic science, (*c*) agriculture.

3. Apprentice courses in the shops, printing-office, and dairy.

Full explanations of the several courses, and of the studies included in them, will be found under the proper headings, and a general view of the four-year courses is given on the pages following.

All the preparatory subjects and nearly all the studies of the first and second years are taught each term, so that students may enter at any term.



ARMORY.

## FIRST YEAR.

## ALL COURSES.

FALL TERM.	Algebra II..... 5
	English Readings I..... 5
	Elementary Botany..... 5
	Hygiene..... 1
	Free-hand Drawing..... 2½
	Woodwork or Sewing I..... 5
	Military Drill or Calisthenics... 4
	Singing and Notation.*
WINTER TERM.	Algebra III..... 5
	English Readings II..... 5
	Agriculture or Elementary Cooking..... 5
	Geometrical Drawing..... 2½
	Foundry or Sewing II..... 5
	Military Drill..... 2 } 3
	Tactics..... 1 }
	or Calisthenics..... 5
	Singing and Notation.*
SPRING TERM.	Geometry I..... 5
	English Themes..... 5
	Elementary Physics..... 5
	Object Drawing..... 2½
	Blacksmithing or Sewing III... 5
	Military Drill or Calisthenics... 5
	Singing and Notation.*

\*Optional.

## FOUR-YEAR COURSES.

This and the three following pages give a general view of the four-year courses of study. The first year is the same for all students, excepting that the young men take military drill, agriculture, and shop work, while the young women take calisthenics, household economics, and sewing.

Figures following studies show class hours per week. Subjects in *italic type* require no study outside of class. Military drill is optional for young men of the third and fourth years. In the fourth year certain terms are open for electives in the science course and domestic science course. The electives are chosen under the direction of the Faculty. In each case, the electives for the three terms are expected to be in the same line as nearly as possible. The following list is announced, and others will be provided as demanded, in so far as the teaching force available will permit:

FALL TERM.	WINTER TERM.	SPRING TERM.
Analytical Geometry.	Calculus.	Calculus.
Domestic Science I.	Domestic Science II.	Domestic Science III.
Chemistry.	Chemistry.	Chemistry.
Comparative Anatomy.	Veterinary Science.	Breeds and Breeding.
German.	German.	German.
Botany.	Botany.	Botany.
History of Education and School Law.	Philosophy of Education.	Methods and Management.
Entomology.	Entomology.	Entomology.
	Horticulture.	Forestry and Landscape-gardening.
		Physics.
		Constitutional Law.

For outline of instruction, see page 42 *et seq.*

## SECOND YEAR. COURSES OF STUDY—Continued.

FALL TERM.	COURSES OF STUDY			
	AGRICULTURE.	DOMESTIC SCIENCE.	GENERAL SCIENCE.	MECH. ENGINEERING.
	Chemistry..... 5 Laboratory..... 2½ Geometry II..... 5 Horticulture..... 5 Industrial..... 5 Horticulture..... 5 Oratory I..... 5 Military Drill..... 5 Music.*..... 5	Chemistry..... 5 Laboratory..... 2½ Geometry II..... 5 Horticulture..... 5 Industrial..... 5 Calisthenics..... 5 Music.*..... 5	Chemistry..... 5 Laboratory..... 2½ Geometry II..... 5 Horticulture..... 5 Industrial..... 5 Military Drill or Calisthenics..... 5 Music.*..... 5	Chemistry..... 5 Laboratory..... 2½ Geometry II..... 5 Projection Drawing..... 5 Oratory I..... 5 Blacksmithing..... 5 Military Drill..... 5 Music.*..... 5
	Organic Chemistry..... 3 Chemistry of Metals..... 2 Laboratory..... 2½ Trigonometry..... 5 Dairying..... 5 Laboratory..... 10 Military Science..... 3	Organic Chemistry..... 3 Chemistry of Metals..... 2 Laboratory..... 2½ Trigonometry..... 5 American Literature..... 2 or 3 Oratory I..... 2 or 3 Dressmaking..... 5 Laboratory..... 5 Calisthenics..... 5	Organic Chemistry..... 3 Chemistry of Metals..... 2 Laboratory..... 2½ Trigonometry..... 5 Physiology..... 2 or 3 Oratory I..... 2 or 3 Industrial..... 3 Military Science..... 3 or Calisthenics..... 5	Kinematics..... 5 Chemistry of Metals..... 2 Laboratory..... 2½ Trigonometry..... 5 Projection Drawing..... 5 Shop and Lectures..... 10 Military Science..... 3
WINTER TERM.	Chemistry..... 2½ Laboratory..... 7½ Entomology..... 5 Fertilizer and Pottery..... 5 Physiology..... 5 Surveying..... 2 Military Drill..... 5	Analytical Chemistry..... 2½ Laboratory..... 7½ Entomology..... 5 Oratory II or Music I..... 2 or 3 Physiology..... 5 Calisthenics..... 5	Analytical Chemistry..... 2½ Laboratory..... 7½ Entomology..... 5 Oratory II..... 2 or 3 Higher Algebra..... 5 Surveying..... 2 Military Drill or Calisthenics..... 5	Analytical Chemistry..... 2½ Laboratory..... 7½ Heat..... 3 Mechanics..... 2 Higher Algebra..... 5 Axonometric Drawing..... 5 Machine-shop..... 5 Military Drill..... 5
SPRING TERM.	Chemistry..... 2½ Laboratory..... 7½ Entomology..... 5 Fertilizer and Pottery..... 5 Physiology..... 5 Surveying..... 2 Military Drill..... 5	Analytical Chemistry..... 2½ Laboratory..... 7½ Entomology..... 5 Oratory II or Music I..... 2 or 3 Physiology..... 5 Calisthenics..... 5	Analytical Chemistry..... 2½ Laboratory..... 7½ Entomology..... 5 Oratory II..... 2 or 3 Higher Algebra..... 5 Surveying..... 2 Military Drill or Calisthenics..... 5	Analytical Chemistry..... 2½ Laboratory..... 7½ Heat..... 3 Mechanics..... 2 Higher Algebra..... 5 Axonometric Drawing..... 5 Machine-shop..... 5 Military Drill..... 5

\* Music optional throughout the course.

For outline of instruction, see page 42 et seq.

## THIRD YEAR. COURSES OF STUDY—Continued.

AGRICULTURE.	DOMESTIC SCIENCE.	GENERAL SCIENCE.	MECH. ENGINEERING.	ELECT. ENGINEERING.
FALL TERM.				
Rhetoric..... 5	Rhetoric..... 5	Rhetoric..... 5	Rhetoric..... 5	Rhetoric..... 5
General History I..... 5	General History I..... 5	General History I..... 5	General History I..... 5	General History I..... 5
Agricultural Chemistry and Soil Physics..... 5	Home Nursing..... 5	Projection Drawing..... 5	Analytical Geometry..... 5	Analytical Geometry..... 5
Hygiene of Farm Animals..... 3	Domestic Science I..... 2	Zoology..... 2½	Descriptive Geometry..... 5	Descriptive Geometry..... 5
Agricultural Mechanics..... 5	Laboratory..... 5	Laboratory..... 7½	Mechanical Drawing..... 5	Mechanical Drawing..... 5
	Oratory III or Music II..... 5	Industrial..... 5	Mechanical Drawing..... 2½	Mechanical Drawing..... 2½
WINTER TERM.				
General History II..... 5	General History II..... 5	General History II..... 5	General History II..... 5	General History II..... 5
Civics..... 5	Civics..... 5	Civics..... 5	Civics..... 5	Civics..... 5
Chemistry of Foods (½ t.)..... 5	Chemistry of Foods (½ t.)..... 5	Oratory III (½ t.)..... 5	Calculus..... 5	Calculus..... 5
Stock Feeding (½ t.)..... 2½	Home Architecture (½ t.)..... 2	Chemistry of Foods (½ t.)..... 5	Oratory II..... 5	Oratory II..... 5
Zoology..... 7½	Domestic Science II..... 5	Logic..... 5	Mechanical Drawing..... 5	Mechanical Drawing..... 5
Laboratory..... 5	Laboratory..... 5	Industrial..... 5	Graphic Statics..... 2½	Graphic Statics..... 2½
Industrial Horticulture..... 5	Floriculture..... 5		Machine-shop..... 5	Machine-shop..... 5
SPRING TERM.				
General History III..... 5	General History III..... 5	General History III..... 5	General History III..... 5	General History III..... 5
Geology..... 5	Geology..... 5	Geology..... 5	Calculus..... 5	Calculus..... 5
Horticulture..... 5	Zoology..... 2½	Bacteriology..... 4	Machine Design..... 5	Machine Design..... 5
Stock Feeding..... 5	Laboratory..... 7½	Laboratory..... 2½	Perspective and Sketching..... 2½	Perspective and Sketching..... 2½
Oratory II..... 5	Domestic Science III..... 2	Perspective and Sketching..... 2½	Mechanical Drawing..... 5	Mechanical Drawing..... 5
	Laboratory..... 5	Industrial..... 5	Machine-shop..... 7½	Machine-shop..... 7½

For outline of instruction, see page 42 et seq.

## R. COURSES OF STUDY—Continued.

	AGRICULTURE.	DOMESTIC SCIENCE.	GENERAL SCIENCE.	MECH. ENGINEERING.	ELECT. ENGINEERING.
FALL TERM.	Physics I..... 5 Economic Principles..... 5 Bacteriology..... 4 <i>Laboratory</i> ..... 2½ Comparative Anatomy..... 5 <i>Industrial</i> ..... 5 <i>Therapeutic</i> ..... 2	Physics I..... 5 Economic Principles..... 5 Bacteriology..... 4 <i>Laboratory</i> ..... 2½ Therapeutic Cookery..... 2 <i>Laboratory</i> ..... 5	Physics I..... 5 Economic Principles..... 5 Elective..... 5 Oratory IV..... 5 <i>Industrial</i> ..... 5	Electricity and Magnetism..... 5 Economic Principles..... 5 Applied Mechanics..... 5 Steam Engineering..... 5 <i>Electrical Measurements</i> ..... 2½ <i>Machine Design</i> ..... 2½ <i>Machine-shop</i> ..... 5	Electricity and Magnetism..... 5 Economic Principles..... 5 Applied Mechanics..... 5 Steam Engineering..... 5 <i>Electrical Measurements</i> ..... 2½ <i>Machine Design</i> ..... 2½ <i>Machine-shop</i> ..... 5
WINTER TERM.	Physics II..... 5 Horticulture..... 5 <i>Botanical Microbiology</i> ..... 5 <i>Laboratory</i> ..... 5 Veterinary Science..... 5	Physics II..... 5 English Literature I..... 5 General Morphology..... 5 <i>Laboratory</i> ..... 5 House Furnishing and Care..... 5	Physics II..... 5 English Literature I..... 5 General Morphology..... 5 <i>Laboratory</i> ..... 5 Elective..... 5	Sound and Light..... 5 Mechanics of Materials..... 5 Dynamo-electric Machines..... 5 <i>Electrical Laboratory</i> ..... 5 <i>Machine Design</i> ..... 5 <i>Machine-shop</i> ..... 5	Sound and Light..... 5 Mechanics of Materials..... 5 Dynamo-electric Machines..... 5 <i>Electrical Laboratory</i> ..... 5 <i>Machine Design</i> ..... 5 <i>Machine-shop</i> ..... 5
SPRING TERM.	English Literature..... 5 Breeds and Breeding..... 5 Plant Diseases and Plant Breeding..... 5 Agricultural Economics..... 5 <i>Thesis</i> ..... 5	English Literature II..... 5 Psychology..... 5 Elective..... 5 <i>Demonstrations</i> ..... 5 <i>Thesis</i> ..... 5	English Literature II..... 5 Psychology..... 5 Elective..... 2 <i>Object Drawing</i> ..... 5 <i>Thesis</i> ..... 5	English Literature..... 5 Applied Mechanics..... 5 Hydraulics..... 5 <i>Engineering Design</i> ..... 40 <i>Eng. Laboratory</i> ..... 2½ <i>Thesis</i> ..... 5	English Literature..... 5 Applied Mechanics..... 5 Hydraulics..... 5 <i>Applied Electricity</i> ..... 5 Electric Power Transmission..... 5 <i>Thesis</i> ..... 5

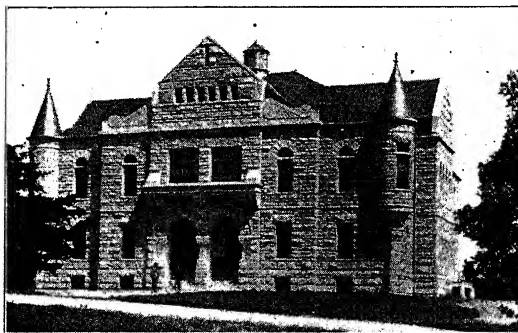
For outline of instruction, see page 42 *et seq.*

### *Agriculture Course.*

The leading feature of the four-year agriculture course is the training offered in methods of farm production. Instruction is given in tillage, crop-production, stock-feeding and breeding, dairying, farm management, orcharding, small-fruit culture, and gardening. Insect life is considered in its relations to the farm, orchard, and garden, including a study of beneficial and injurious insects, with practical methods of combating the latter; and the laws of disease and health are studied, with the causes of diseases of farm animals and methods of avoiding and combating them. Work is required on the farm, and in the orchards and gardens, which will familiarize the student with the best method of conducting operations in these lines; and taken with this work is a study of the results secured by the College in crop-production, fruit-raising, gardening, and feeding for beef, milk, and pork. Three terms of work are given in the carpenter and blacksmith shops, that the student may learn to handle tools and be able to make the common repairs needed on the farm.

Closely connected with agriculture are the sciences upon which successful farm practices are based. Bacteriology is taught, that the student may understand the conditions necessary for promoting the growth of bacteria which add to the fertility of the soil and those which improve the quality of dairy products; and the conditions necessary to prevent the growth of bacteria which exhaust the soil, cause losses in manures, injure dairy products, and bring disease. The laws of plant growth are taught in botany, that the farmer may through their aid grow larger and better crops. An understanding of the laws of physics enables the farmer to store moisture and to reduce the loss of water from the soil by evaporation, so that he can produce crops in dry years. A knowledge of chemistry applied to farm work secures richer soil, better yields, cheaper and greater gain in feeding, and better quality of farm products. The fertility of our new lands has been produced by forces which have been at work for countless ages. A knowledge of the workings of these forces, as taught in geology, helps the farmer to save the fertility of his fields until used for crops and to render available the immense food stores locked up in the soil.

A farmer should be an influential citizen as well as a skilful producer. For this reason, in the agricultural course instruction is given in literature and language, political and economic science, oratory, mathematics, drawing, and music. Such training enables the farmer to take part and become an influential factor in social and public work. Young men securing an education such as is afforded in this course do not leave the farm, but become enthusiastic and successful workers, competent either to manage farms of their own or to superintend farms for others.



AGRICULTURAL BUILDING.

**Agriculture Course.**

First column of figures indicates hours per week.

Second column shows page in this catalogue where full description may be found.

**First Year.****FALL TERM:**

Algebra II.....	5	62
English Readings I.....	5	55
Elementary Botany.....	5	43
Hygiene.....	1	78
Free-hand Drawing.....	2½	53
Woodwork.....	5	64
Military Drill.....	4	68

**WINTER TERM:**

Algebra III.....	5	62
English Readings II.....	5	56
Agriculture.....	5	42
Geometrical Drawing.....	2½	53
Foundry.....	5	64
Military Drill.....	2	68
Tactics.....	1	68

**SPRING TERM:**

Geometry I.....	5	63
English Themes.....	5	56
Elementary Physics.....	5	74
Object Drawing.....	2½	53
Blacksmithing.....	5	64
Military Drill.....	5	68

**Second Year.****FALL TERM:**

Chemistry.....	5	46
Chemistry Laboratory.....	2½	46
Geometry II.....	5	63
Horticulture.....	5	60
Industrial, Horticulture.....	5	61
Oratory I.....	5	72
Military Drill.....	5	68

**WINTER TERM:**

Organic Chemistry.....	3	46
Chemistry of Metals.....	2	46
Chemistry Laboratory.....	2½	46
Trigonometry.....	5	63
Dairying.....	5	49
Dairy Laboratory.....	10	49
Military Science.....	3	68

**SPRING TERM:**

Analytical Chemistry.....	2½	46
Chemistry Laboratory.....	7½	46
Entomology.....	5	58
Tillage and Fertility.....	5	42
Physiology.....	5	78
Surveying.....	2	63
Military Drill.....	5	68

**Third Year.****FALL TERM:**

Rhetoric.....	5	56
General History I.....	5	59
Agricultural Chemistry and Soil Physics.....	5	47
Hygiene of Farm Animals....	3	78
Agricultural Mechanics....	5	64

**WINTER TERM:**

General History II.....	5	59
Civics.....	5	59
Chemistry of Foods, 1st half,	5	47
Stock Feeding, 2d half.....	5	42
Zoology.....	2½	58
Zoology Laboratory.....	7½	58
Industrial, Horticulture...	5	61

**SPRING TERM;**

General History III.....	5	59
Geology.....	5	58
Horticulture.....	5	60
Stock Feeding.....	5	42
Oratory II.....	5	72

**Fourth Year.****FALL TERM:**

Physics.....	5	74
Economic Principles.....	5	59
Bacteriology.....	4	78
Bacteriology Laboratory..	2½	78
Comparative Anatomy.....	5	78
Industrial.....	5	—

**WINTER TERM:**

Physics.....	5	75
Horticulture.....	5	60
General Morphology.....	5	44
Botany Laboratory.....	5	44
Veterinary Science.....	5	78

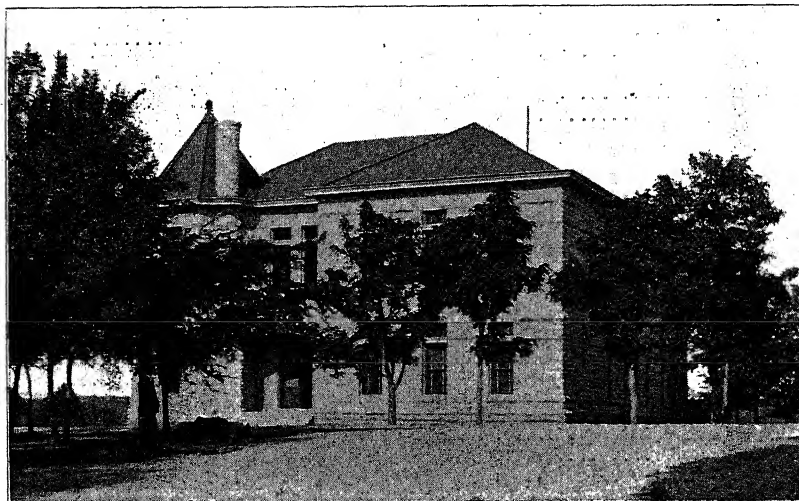
**SPRING TERM:**

English Literature.....	5	56
Breeds and Breeding.....	5	43
Plant Diseases and Plant Breeding.....	5	44
Agricultural Economics.....	5	43
Thesis.....	—	—

### *Domestic Science Course.*

The aim of the domestic science course is both specific and general. Technically it is an application of the sciences of bacteriology to the study of home sanitation and hygiene, of physiology and chemistry to the composition of foods and their effects, of physics as applied to heating and lighting. These sciences necessarily, therefore, underlie the successful and intelligent conduct of the home, whether it be large or small, and must be included in any well-arranged course of domestic science. In the kitchen laboratory a standard system of measurement is taught, and constant emphasis is placed upon neatness, accuracy and economy in the handling of the material and utensils. The instruction in domestic art includes all the various kinds of hand sewing, the making of plain garments, and a complete system of dressmaking. Thus, while the course is based upon studies of a thoroughly scientific nature, the industrial features characteristic of the College are made highly practical and are continued throughout the course.

While the domestic science course emphasizes, primarily, the practical and material side of life, it does not stop here. To the end that well-rounded culture may be secured, studies are offered in this course in English, history, economics, psychology, and oratory. The young women are constantly reminded that life is not all drudgery; that technical knowledge and scientific skill, even, fail to include the full meaning of education in its highest sense. They are taught that any training that fails to develop, harmoniously, body, mind, and spirit, is inadequate and incomplete. They are brought face to face with ideals as well as with actualities; and are made to see that, while skilful labor is the crowning dignity of life, grace, refinement and self-poise are the highest ingredients of true service.



DOMESTIC SCIENCE HALL.

**Domestic Science Course.**

First column of figures indicates hours per week.  
Second column shows page in this catalogue where full description may be found.

**First Year.**

**FALL TERM:**

Algebra II .....	5	62
English Readings I.....	5	55
Elementary Botany.....	5	43
Hygiene .....	1	51
Free-hand Drawing .....	2½	53
Sewing I .....	5	52
Calisthenics.....	4	73

**WINTER TERM:**

Algebra III.....	5	62
English Readings II.....	5	56
Elementary Cookery.....	5	51
Geometrical Drawing.....	2½	53
Sewing II.....	5	52
Calisthenics.....	5	73

**SPRING TERM:**

Geometry I .....	5	63
English Themes.....	5	56
Elementary Physics.....	5	74
Object Drawing.....	2½	53
Sewing III.....	5	52
Calisthenics.....	5	73

**Second Year.**

**FALL TERM:**

Chemistry .....	5	46
Chemistry Laboratory.....	2½	46
Geometry II .....	5	63
Horticulture .....	5	60
Industrial.....	5	—
Calisthenics.....	5	73

**WINTER TERM:**

Organic Chemistry .....	3	46
Chemistry of Metals.....	2	46
Chemistry Laboratory.....	2½	46
Trigonometry.....	5	63
or American Literature.....	5	56
Oratory I.....	2 or 3	72
Dressmaking.....	5	52
Dressmaking Laboratory..	5	52
Calisthenics.....	5	73

**SPRING TERM:**

Analytical Chemistry.....	2½	46
Chemistry Laboratory.....	7½	46
Entomology.....	5	58
Oratory II or Music I... 2 or 3		72
Physiology.....	5	78
Calisthenics.....	5	73

**Third Year.**

**FALL TERM:**

Rhetoric .....	5	56
General History I.....	5	59
Home Nursing .....	5	51
Domestic Science I.....	2	51
Dom. Science Laboratory..	5	51
Oratory III or Music II...	5	72

**WINTER TERM:**

General History II.....	5	59
Civics .....	5	59
Chemistry of Foods, 1st half,	5	47
Home Architecture, 2d half..	5	54
Domestic Science II.....	2	51
Dom. Science Laboratory..	5	51
Floriculture .....	5	61

**SPRING TERM:**

General History III.....	5	59
Geology.....	5	58
Zoölogy.....	2½	58
Zoology Laboratory.....	7½	58
Domestic Science III.....	2	51
Dom. Science Laboratory..	5	51

**Fourth Year.**

**FALL TERM:**

Physics I.....	5	74
Economic Principles.....	5	59
Bacteriology .....	4	78
Bacteriology Laboratory..	2½	78
Oratory IV or Music III....	3	73
Therapeutic Cookery.....	2	51
Dom. Science Laboratory..	5	51

**WINTER TERM:**

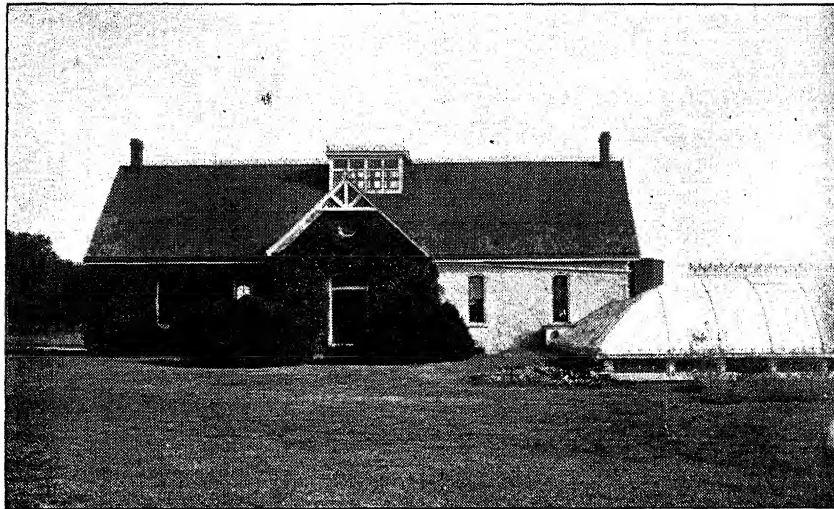
Physics II .....	5	75
English Literature .....	5	56
General Morphology.....	5	44
Botany Laboratory.....	5	44
House Furnishing and Care..	5	51

**SPRING TERM:**

English Literature .....	5	56
Psychology .....	5	73
Elective .....	5	—
Demonstrations .....	5	51
Thesis .....	2	—

*General Science Course.*

This course is designed to meet the wants of those who seek to obtain a sound and liberal education through the study of the mathematical, physical and natural sciences, English language, and history. It is well adapted to the student who has not yet decided upon his life-work, or who wishes to make this a foundation for further study. It is based on the principle of "a general knowledge of all things before a special knowledge of a few." It will be well worth one's time to take this course before beginning the work of a technical or professional course. The industrial work is a feature of this course, as of all others, and after the first year it is largely elective. This gives ample opportunity to specialize along any line of work, should the student desire. The elective continuing through the fourth year gives opportunity for some special lines, as follows: Young men may take analytical geometry, differential and integral calculus with the third-year engineering students, and young women may take the three terms in domestic science with the third-year women of the domestic science course. Work in other departments may be elected, as: Agriculture, chemistry, physics, horticulture and entomology, veterinary science, and German. In each case, the electives for three terms are expected to be in the same line as nearly as possible. Other electives will be provided as demanded, as far as the teaching force available will permit. Music is optional throughout the four years, and young women are allowed to take it as an industrial after the first year, by permission of the Faculty.



HORTICULTURAL HALL.

**General Science Course.**

First column of figures indicates hours per week.

Second column shows page in this catalogue where full description may be found.

**First Year.****FALL TERM:**

Algebra II.....	5	62
English Readings I.....	5	55
Elementary Botany.....	5	43
Hygiene.....	1	51
Free-hand Drawing.....	2½	53
Woodwork.....	5	64
or Sewing I.....	5	52
Military Drill.....	4	68
or Calisthenics.....	4	73

**WINTER TERM:**

Algebra III.....	5	62
English Readings II.....	5	56
Agriculture.....	5	42
or Elementary Cookery.....	5	51
Geometrical Drawing.....	2½	53
Foundry.....	5	64
or Sewing II.....	5	52
Military Drill.....	2	68
and Tactics.....	1	68
or Calisthenics.....	5	73

**SPRING TERM:**

Geometry I.....	5	63
English Themes.....	5	56
Elementary Physics.....	5	74
Object Drawing.....	2½	53
Blacksmithing.....	5	64
or Sewing III.....	5	52
Military Drill.....	5	68
or Calisthenics.....	5	73

**Second Year.****FALL TERM:**

Chemistry.....	5	46
Chemistry Laboratory.....	2½	46
Geometry II.....	5	63
Horticulture.....	5	60
Industrial Elective.....	5	—
Military Drill.....	5	68
or Calisthenics.....	5	73

**WINTER TERM:**

Organic Chemistry.....	3	46
Chemistry of Metals.....	2	46
Chemistry Laboratory.....	2½	46
Trigonometry.....	5	63
Physiology.....	5	78
Oratory I.....	2 or 3	72
Industrial Elective.....	5	—
Military Science.....	3	68
or Calisthenics.....	5	73

**SPRING TERM:**

Analytical Chemistry.....	2½	46
Chemistry Laboratory.....	7½	46
Entomology.....	5	58
Oratory II.....	2 or 3	72
Higher Algebra.....	5	63
Surveying.....	2	63
Military Drill.....	5	68
or Calisthenics.....	5	73

**Third Year.****FALL TERM:**

Rhetoric.....	5	56
General History I.....	5	59
Projection Drawing.....	5	54
Zoölogy.....	2½	58
Zoology Laboratory.....	7½	58
Industrial Elective.....	5	—

**WINTER TERM:**

General History II.....	5	59
Civics.....	5	59
Oratory III, 1st half.....	5	72
Chemistry of Foods, 2d half.....	5	47
Logic.....	5	73
Industrial Elective.....	5	—

**SPRING TERM:**

General History III.....	5	59
Geology.....	5	58
Bacteriology.....	4	78
Bacteriology Laboratory.....	2½	78
Perspective and Sketching.....	2½	54
Industrial Elective.....	5	—

**Fourth Year.****FALL TERM:**

Physics.....	5	74
Economic Principles.....	5	59
Elective.....	5	—
Oratory IV.....	5	73
Industrial Elective.....	5	—

**WINTER TERM:**

Physics.....	5	75
English Literature.....	5	56
General Morphology.....	5	44
Botany Laboratory.....	5	44
Elective.....	5	—

**SPRING TERM:**

English Literature.....	5	56
Psychology.....	5	73
Elective.....	5	—
Object Drawing.....	5	54
Thesis.....	—	—

### *Mechanical Engineering Course.*

This course offers four years' training in mechanical engineering subjects, and its object is to fit young men for responsible positions in that profession. It prepares for the successful management of machinery and manufacturing establishments, the designing, building and erection of machinery, superintendence of construction, etc. Though the work is largely technical, general studies of a broadening character are not excluded. The course includes instruction by text-book, lecture, laboratory, and workshop practice, and is especially based on mathematics, pure and applied mechanics, physics, chemistry, machine design, structural design, and steam engineering.

The course of study has been laid out with the aim of securing a judicious mixture of theory and practice, such as will not only give the student the technical skill required for engineering operations, but also a broad grasp of the fundamental principles of his profession. The advantages of combining a practical application of principles with theoretical instruction at the time these principles are being impressed by classroom work is well known. The shop work, being purely educational in its character, is so arranged that each student can make as rapid advancement as possible. Instruction is given by skilled workmen, and the work carried on is of the practical character, being, in fact, the building of lathes, engines, drills and machinery for the market and the department. In all shop practice the students work from blue-prints, thus learning to read drawings readily and supplementing the work of the drawing department.

Based upon the fundamental principle that laboratory and shop work, combined with technical training, constitute one of the most important features of engineering education, the course on opposite page is offered.



MECHANICS' HALL.

**Mechanical Engineering Course.**

First column of figures indicates hours per week.

Second column shows page in catalogue where full descriptions may be found.

**First Year.****FALL TERM:**

Algebra II.....	5	62
English Readings I.....	5	55
Elementary Botany.....	5	43
Hygiene.....	1	78
Free-hand Drawing.....	2½	53
Woodwork.....	5	64
Military Drill.....	4	68

**WINTER TERM:**

Algebra III.....	5	62
English Readings II.....	5	56
Agriculture.....	5	42
Geometrical Drawing.....	2½	53
Foundry.....	5	64
Military Drill.....	2	68
Tactics.....	1	68

**SPRING TERM:**

Geometry I.....	5	63
English Themes.....	5	56
Elementary Physics.....	5	74
Object Drawing.....	2½	53
Blacksmithing.....	5	64
Military Drill.....	5	68

**Second Year.****FALL TERM:**

Chemistry.....	5	46
Chemistry Laboratory.....	2½	46
Geometry II.....	5	63
Projection Drawing.....	5	53
Oratory I.....	5	72
Blacksmithing.....	5	64
Military Drill.....	5	68

**WINTER TERM:**

Kinematics.....	5	64
Chemistry of Metals.....	2	46
Chemistry Laboratory.....	2½	46
Trigonometry.....	5	63
Projection Drawing.....	5	53
Machine-shop and Lectures.....	10	64
Military Science.....	3	68

**SPRING TERM:**

Analytical Chemistry.....	2½	46
Chemistry Laboratory.....	7½	46
Heat.....	3	74
Mechanics.....	2	64
Higher Algebra.....	5	63
Axonometric Drawing.....	5	53
Machine-shop.....	5	65
Military Drill.....	5	68

**Third Year.****FALL TERM:**

Rhetoric.....	5	56
General History I.....	5	59
Analytical Geometry.....	5	63
Descriptive Geometry.....	5	53
Machine-shop.....	5	65
Mechanical Drawing.....	2½	65

**WINTER TERM:**

General History II.....	5	59
Civics.....	5	59
Calculus.....	5	63
Oratory II.....	5	72
Mechanical Drawing.....	5	65
Graphic Statics.....	2½	65
Machine Shop.....	5	65

**SPRING TERM:**

General History III.....	5	59
Calculus.....	5	63
Machine Design.....	5	65
Perspective and Sketching.....	2½	54
Mechanical Drawing.....	5	65
Engine Running.....	7½	65

**Fourth Year.****FALL TERM:**

Electricity and Magnetism.....	5	74
Economic Principles.....	5	59
Steam Engineering.....	5	65
Applied Mechanics.....	5	65
Engineering Laboratory.....	2½	65
Machine Design.....	2½	65
Machine-shop.....	5	65

**WINTER TERM:**

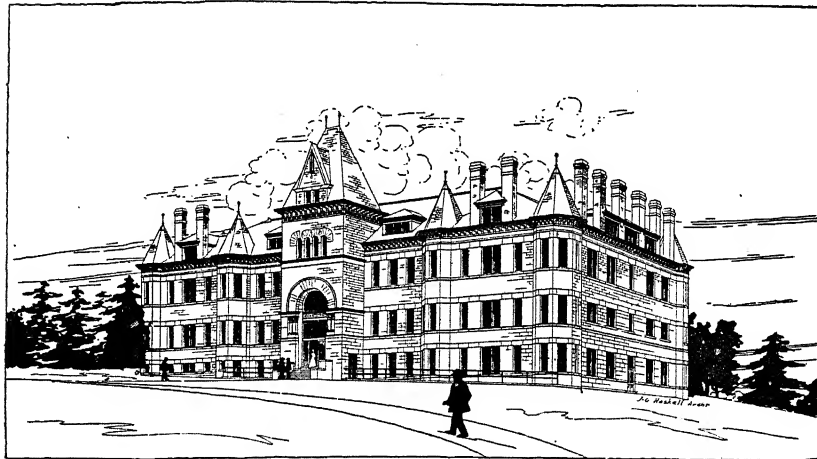
Sound and Light.....	5	74
Applied Mechanics.....	5	65
Engineering Power Plants.....	5	65
Engineering Laboratory.....	5	65
Machine Design.....	5	65
Machine-shop.....	5	65

**SPRING TERM:**

English Literature.....	5	56
Applied Mechanics.....	5	65
Hydraulics.....	5	65
Engineering Design.....	10	65
Engineering Laboratory.....	2½	65
Thesis.....	—	—

*Electrical Engineering Course.*

This course is arranged to supply the demand for men who have a practical knowledge of electricity, as well as a thorough knowledge of the principles and laws governing the forces and phenomena with which they have to deal. The applications of electricity are broadening out so rapidly by discovery and invention and by increased commercial applications, that new facts are to be met with almost daily. To meet these demands, the student should be well grounded in all the branches underlying his profession. This course is therefore made strong in mathematical and physical sciences. A well-equipped electrical engineer should also be a mechanical engineer, and must have some training in the principles of steam and hydraulic engineering as well as heat, plumbing, etc. Drawing, machine design, and mechanics of machinery, together with shop practice, occupy considerable portion of the time of the student. Some general-culture studies are offered in history and economics, oratory, and English. It is believed that this course will give a broad general training, with sufficient technical knowledge to meet the needs of a practical engineer.



PHYSICAL SCIENCE HALL.

**Electrical Engineering Course.**

First column of figures indicates hours per week.

Second column shows page in this catalogue where full description may be found.

**First Year.****FALL TERM:**

Algebra II.....	5	62
English Readings I.....	5	55
Elementary Botany.....	5	43
Hygiene.....	1	78
Free-hand Drawing.....	2½	53
Woodwork.....	5	64
Military Drill.....	4	68

**WINTER TERM:**

Algebra III.....	5	62
English Readings II.....	5	56
Agriculture.....	5	42
Geometrical Drawing.....	2½	53
Foundry.....	5	64
Military Drill.....	2	68
and Tactics.....	1	68

**SPRING TERM:**

Geometry I.....	5	63
English Themes.....	5	56
Elementary Physics.....	5	74
Object Drawing.....	2½	53
Blacksmithing.....	5	64
Military Drill.....	5	68

**Second Year.****FALL TERM:**

Chemistry.....	5	46
Chemistry Laboratory.....	2½	46
Geometry II.....	5	63
Projection Drawing.....	5	53
Oratory I.....	5	72
Blacksmithing.....	5	64
Military Drill.....	5	68

**WINTER TERM:**

Kinematics.....	5	64
Chemistry of Metals.....	2	46
Chemistry Laboratory.....	2½	46
Trigonometry.....	5	63
Projection Drawing.....	5	53
Machine-shop and Lectures.....	10	64
Military Science.....	3	68

**SPRING TERM:**

Analytical Chemistry.....	2½	46
Chemistry Laboratory.....	7½	46
Heat.....	3	74
Mechanics.....	2	64
Higher Algebra.....	5	63
Axonometric Drawing.....	5	53
Machine-shop.....	5	64
Military Drill.....	5	68

**Third Year.****FALL TERM:**

Rhetoric.....	5	56
General History I.....	5	59
Analytical Geometry.....	5	63
Descriptive Geometry.....	5	53
Machine-shop.....	5	64
Mechanical Drawing.....	2½	64

**WINTER TERM:**

General History II.....	5	59
Civics.....	5	59
Calculus.....	5	63
Oratory II.....	5	72
Mechanical Drawing.....	5	64
Graphic Statics.....	2½	65
Machine-shop.....	5	64

**SPRING TERM:**

General History III.....	5	59
Calculus.....	5	63
Machine Design.....	5	65
Perspective and Sketching.....	2½	54
Mechanical Drawing.....	5	65
Engine Running.....	7½	65

**Fourth Year.****FALL TERM:**

Electricity and Magnetism.....	5	74
Economic Principles.....	5	59
Steam Engineering.....	5	65
Applied Mechanics.....	5	65
Electrical Measurements.....	2½	75
Machine Design.....	5	65
Machine-shop.....	5	65

**WINTER TERM:**

Sound and Light.....	5	74
Applied Mechanics.....	5	65
Dynamo-electric Machines.....	5	75
Electrical Laboratory.....	5	75
Machine Design.....	5	65
Machine-shop.....	5	65

**SPRING TERM:**

English Literature.....	5	56
Applied Mechanics.....	5	65
Hydraulics.....	5	65
Electric Power Transmission.....	5	75
Applied Electricity.....	5	75
Thesis.....	-	-

## *Outline of Instruction.*

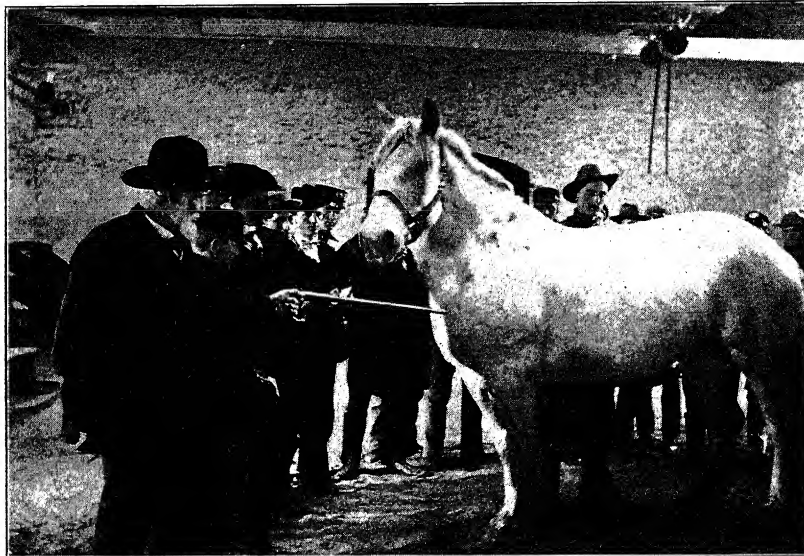
### *Agriculture.*

No. 1 is required of all young men; the other numbers in the agriculture course only.

1. **Agriculture.** First year, winter term. Treats of soils, their contents, texture, moisture, tillage, and enrichment; the farm plant, its office, propagation, growth, and care; the animal, its life, feed, and management. Five hours per week. Text-book, Bailey's Principles of Agriculture. Lectures.

2. **Tillage and Fertility.** Second year, spring term. The management of the soil for maintaining and increasing its productivity, with special study of conservation of moisture. Includes a study of the nature, functions, texture and washing of soils, with the amount and availability of plant-food in soils; practical methods of rendering more plant-food available; plows and plowing, and other implements and methods of tillage; the conservation of soil moisture; farm manures; nitrification; clover crops, fallows, and improvement of soils by clover and alfalfa; rotations; selection of seed; methods of planting; treatment after planting and harvesting of grain, grass, root and forage crops; and special treatment. Five hours per week. Text-book, Robert's Fertility of the Land. Lectures.

3. **Stock Feeding.** Third year, winter term, half study; spring term, full study. The properties of feed stuffs, and their combination to secure good results at least cost with products having the desired qualities; effect of feeds on



JUDGING HORSES.

quality of products; preparation of feeds; methods of feeding; care and shelter of farm animals; construction of farm buildings and appliances to secure best returns from feed and for saving labor; study of experimental work in stock feeding. Five hours per week. Text-book, Henry's Feeds and Feeding. Lectures.

4. **Breeds and Breeding.** Third year, spring term. History and characteristics of the breeds of live stock, and their adaptability to Kansas conditions; laws of heredity, atavism; law of correlation; variation; conditions affecting fecundity; in-and-in breeding and cross-breeding; form as an index to qualities; selection and judging of live stock; compiling pedigrees. Five hours per week, Text-book, Miles's Stock Breeding. Lectures.

5. **Agricultural Economics.** Fourth year, spring term. Selection, equipment and management of the farm; farm labor, buildings, and machinery; field and feeding experiments; study of markets for farm products; agricultural history. Five hours per week. Lectures. Library references.

#### MEANS OF ILLUSTRATION.

Two hundred and eighty acres of land for farm purposes, with fields in alfalfa, grasses, grains, and forage crops, illustrating the best methods of field work.

A barn, fifty by seventy-five feet, arranged for experimental purposes, connected with a stock-judging room, forty-eight by ninety-six feet. The barns are filled with improved machinery for shelling, grinding, thrashing, cleaning and grading grain, and for cutting for the silo. A model dairy barn for eighty cows, and cows to fill it.

#### *Botany.*

The instruction in the botanical department is along three lines:

*First, as a Pure Science.*—The department aims to give the student the training in observation and scientific reasoning, and also the information which he should have as a matter of general knowledge, regardless of his subsequent vocation. Botany is the first natural science to which the student is introduced in his College course, and for this reason it is necessary that he receive in this department his elementary training in scientific methods.

*Second, as a Science Underlying Agriculture.*—It is well recognized that botany is one of the most important of the sciences upon which the practice of agriculture is based, for the reason that botany deals with plant life, and plant life is at the basis of agriculture. Whenever practicable, illustrations and examples in both the elementary and advanced work are chosen with particular reference to their bearing upon agriculture.

*Third, Technical Botany,* including such subjects as are of direct application in agriculture. The training in the special botanical studies of the agriculture course is chiefly of this nature, as will be seen by consulting the outline below.

Of the studies described below, Nos. 1 and 2 are required in the general science and domestic science courses; Nos. 1, 2 and 3 in the agriculture course, and No. 1 in the mechanical and electrical engineering courses.

1. **Elementary Botany.** First year, fall term. This course covers the elements of morphology, physiology, and ecology. All of the great groups of plants are taken up and discussed in the order of their evolutionary development. Especial attention is given to the changes in structure which appear in response to changes in environment. Emphasis is laid upon the plasticity and adaptiveness of the plant organism. By grasping this fundamental conception at the outset,

the facts of plant life, particularly studied in horticulture and agriculture, become more comprehensible and significant. The work of the classroom is supplemented by field trips under the immediate direction and supervision of the head of the department and the assistant. In this way a knowledge is gained of the relation of plants to each other and to their environment. A general study of the classification of the plant kingdom, sufficient to enable the student to understand the broad outlines, and the relationships of the great alliances, is secured in this course, and, by coming into close contact with plants as living organisms in their natural habitats, he becomes acquainted with the factors that regulate their life and activity. Coulter's Plant Studies is the text used.

2. **General Morphology.** Fourth year, winter term. During this term the forms and structural relations of representatives of all the great groups of plants are studied in detail in the laboratory. The object of the course is to give the student a comparative understanding of the morphological character of the more important members of the plant kingdom. In this work, accuracy of observation is developed by exact studies, and drawings from the gross object with the unaided eye, and by means of the simple and the compound microscope. All necessary instruments and reagents are supplied by the laboratory. Drawing utensils are provided by the students, under the direction of the professor of botany. Laboratory outlines are furnished by the department.

3. **Plant Diseases and Plant Breeding.** Fourth year, spring term. Lectures and laboratory work. The first half of the term is devoted to the study of plant breeding and plant evolution. The laws of heredity and variation are studied, and their application to the improvement of economic plants by selection and cross-breeding. The extended series of experiments now being conducted by the Experiment Station will be used for illustration. The work in plant breeding is conducted by means of lectures and conferences, supplemented by laboratory and field observation so far as possible. Bailey's Plant Breeding, and Darwin's Origin of Species are the basis of the required reading, and are to be



MAIN DRIVE

procured by those taking the course. The second half of the term is devoted to the study of the commoner fungi which cause diseases in economic plants. The student is familiarized by the lectures with the great groups of the fungi and their chief subsidiary groups. The general morphology of these is discussed successively, and the morphology and physiology of the particular representative of each selected for laboratory study is given in detail, together with combative and preventive measures. In this way a foundation is laid for intelligent and systematic investigation of any of the economic fungi which the student may wish to carry on in the future. A rich herbarium of types, and a constantly growing set of duplicates, furnishes abundant material for the work, and is supplemented by alcoholic specimens properly killed and fixed and by prepared slides. Ample literature on the subject of plant diseases is afforded by the library of the department and of the Experiment Station. H. Marshall Ward's *Disease in Plants* is used as a text. Prerequisites are courses 1 and 2 or their equivalents.

#### GRADUATE COURSE.

4. General morphology of thallophytes. Winter term, three afternoons a week. Lectures and laboratory work. This course involves a detailed study of the morphological characters of the algæ, fungi, and lichens.

5. General morphology of the bryophytes and pteridophytes. Spring term, three afternoons a week. Lectures and laboratory work. The work begun in course 4 is here continued in the higher groups of liverworts, mosses, and ferns. Especial attention is given to evolutionary lines of development in these groups.

6. General morphology of the spermatophytes. Spring term, three afternoons a week. Lectures and laboratory work. The work of this course will be given in alternate years with course 5, and covers the morphology of the gymnosperms, monocotyledons, and dicotyledons, representatives of each of the chief groups of these great alliances being studied in considerable detail.

7. Morphology and physiology of economic grasses. Spring term, three afternoons a week. Lectures and laboratory work. This course contemplates a detailed study of the cereals and other economic grasses; their history, distribution, structure, and habits.

8. **Ecology.** Fall term, three days a week. This course involves the study of the reactions of plants to their environment in their associative relations as plant societies. Problems of ecological and geographical distribution will be considered, and as far as possible the work will be made individual, each student being directed into some special ecological question as early as possible. Lectures and conferences will furnish general guidance, and special reading will be assigned. The work proper will be strictly in the field.

9. **Plant Histology.** Spring term, two afternoons a week. This is a course in laboratory methods, involving a study of processes of killing, fixing and preserving plant tissues; dehydrating, imbedding in paraffin and celloidin; microtome sectioning; mounting and staining of slides. A varied series of preparations will be worked upon, with a view to the acquisition of facility in technique and in the preparation of material for research.

#### MEANS OF ILLUSTRATION.

A general herbarium, consisting of a large collection of plants of the United States and other countries; a Kansas herbarium, containing specimens illustrating the distribution and variation of plants throughout the state; a twig herbarium, illustrating woody plants in their winter condition; and a seed herbarium, containing a representative collection of seeds and fruits, amounting all together, to about 70,000 specimens; also thirty-eight compound microscopes, seven dissecting microscopes, tools, reagents, etc. The department is provided with a zinc culture room, and the ordinary apparatus for bacteriological work.

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### *Chemistry.*

All of the industries are becoming more and more dependent for their highest success upon the intelligent application of the sciences, and the special sciences are making their greatest progress by tracing their phenomena back to the physical and chemical changes that accompany them. A study of chemistry and physics is therefore essential to any understanding of the processes of nature or human industry. In the instruction in chemistry the aim is to insist upon a mastery of the chief concepts of the pure science through the agency of text-book drill, accompanied by demonstrations in the lecture-room, and experimental observations by the student himself in the laboratory. As the course proceeds, illustrations of chemical principles are drawn from the industrial processes of the chemical, agricultural, domestic, and other arts, thus impressing the practical nature of the study. The ultimate object of the instruction is to develop in the student the power to form independent judgments upon the manifold problems of daily life in which chemistry plays a part.

Of the studies described below, Nos. 1, 2 and 4 are required in all courses. In the general science and domestic science courses, Nos. 3 and 6 are required in addition, and in the agriculture course Nos. 3, 5 and 6.

1. **Chemistry.** Second year, fall term. This term's work is designed to give the student a knowledge of the fundamental principles of the science as illustrated by the chemistry of the non-metals. The text-book is supplemented by lectures, and the subjects are amply illustrated by experimental demonstrations. Elementary physics is a prerequisite. Text-book, Remsen's Introduction to the Study of Chemistry.

*Laboratory.*—This course includes laboratory work two hours per week, in which the student performs most of the experiments of the text-book, or others similar. In this, as in all of the laboratory work in chemistry, the objects are to illustrate chemical phenomena, and to teach care in manipulation, attentive observation, logical deduction, and discrimination and care in recording results and conclusions. Laboratory guide, Remsen and Randall's Chemical Experiments.

2. **Chemistry of Metals.** Second year, winter term, first five weeks. The properties and uses of the more important metals, their occurrence in nature, mode of preparation, and the preparation and properties of their more important compounds are considered. At the same time, opportunity is taken to still further develop the general principles of chemistry. Text-book, same as for course 1.

*Laboratory.*—This work illustrates the classroom lessons during the first half-term. The second half-term consists of preliminary work in qualitative analysis upon known salts and simple mixtures. In this W. A. Noyes's Qualitative Analysis is used.

3. **Organic Chemistry.** Second year, winter term, last seven weeks. In a course as brief as this only a few of the most fundamental general principles and reactions can be considered, and especial attention is given to topics bearing upon the arts and industries. The subject is amply illustrated by experiments on the lecture table, but the students have no laboratory work in this connection. Text-book, Remsen's Organic Chemistry (in part); supplemented by lectures. Course 1 must precede this.

4. **Analytical Chemistry.** Second year, spring term. Two lessons and recitations per week accompany the laboratory work. In these and in the laboratory the teaching of analysis as such is a secondary object, although the student is held to the exact observations and careful reasoning required in ascertaining the composition of single substances and mixtures. The prime object

of the course is to increase the student's knowledge of chemistry as a whole; by approaching reactions from another direction, to obtain a broader view of the science. The lessons include a review of the more important topics of inorganic chemistry, in which it is seen that the occurrence of elements or compounds in nature, and their preparation in the arts are closely connected with the reactions made use of in the identification of them in analysis. The exercises are so arranged as to pass from the simple to the more difficult, and at the same time to facilitate the comparative study of the several cations and anions. Courses 1 and 2 must precede this. Text-books, Remsen's *Introduction to the Study of Chemistry*, and W. A. Noyes's *Qualitative Analysis*.

*Laboratory*.—Nearly all of the work of the term is upon unknown substances, preparation for this having been made the preceding term. The work at first is upon single soluble substances, mixtures and insoluble substances being given later. Text-book, W. A. Noyes's *Qualitative Analysis*. The larger standard works on chemical analysis are available for reference in addition.

5. **Agricultural Chemistry and Soil Physics.** Third year, fall term. Among the subjects treated are: The formation and characteristics of different types of soil; the soil requirements of a variety of crops; the modes of soil enrichment and amelioration, and the general relations of crops to earth, air and water. Both chemical and physical relations are considered throughout this course, but special attention is given to the study of soil moisture from the physical point of view. The chemical characteristics of the most important feeding-stuffs, and the conditions affecting these are also studied. Text-books, Snyder's *Soils and Fertilizers*, and Henry's *Feeds and Feeding*. These are supplemented by lectures. Courses 3 and 4 must precede this.

6. **Chemistry of Foods.** Third year, winter term, six weeks. This is a course of lectures on the composition of foods and feeds, the methods of investigation employed in their study, the functions that the several classes of compounds perform in nutrition, and the changes which they undergo in cooking and digestion. Water-supply and purification of water are also treated. Course 3 and physiology must precede this course.

#### MORE ADVANCED COURSES.

Advanced work in chemistry is offered in graduate courses and as electives in the general science and the domestic science courses. Classes requiring lectures and recitations will not be organized for less than three students.

7. **Inorganic Chemistry.** Fall and winter terms. This course includes a thorough study of one of the larger text-books, such as Richter's or Newth's, accompanied by a special course of laboratory work.

8. **Organic Chemistry.** Spring term. This course includes laboratory work, and the study of a text-book adapted to the advancement of the students. When sufficient demand exists it will be extended to two terms.

9. **Chemistry of Foods.** This course is designed for graduate students taking domestic science, and extends through a year. It consists of study of the literature treating of food and nutrition from a chemical standpoint, accompanied by laboratory work in the separation and study of the constituents of foods, drinks, and condiments. This course may be extended to almost any extent, and leads naturally to the quantitative analysis of foods.

10. **Quantitative Analysis.** This may be taken at any time after completing course 4. After the necessary preliminary training, the student may give special attention to any line of quantitative analysis, such as that of foods and fodders, soils and fertilizers, ores, water, gases, etc. The investigation of special chemical questions is encouraged.

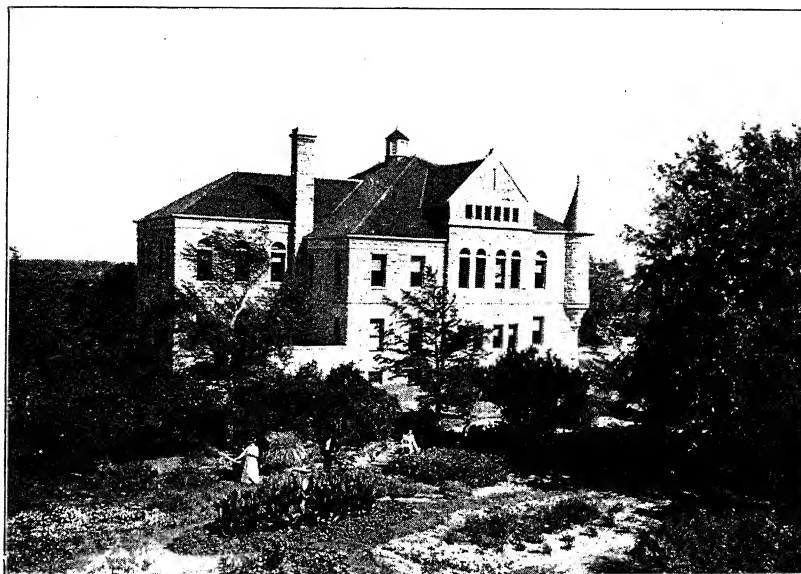
11. **Historical and Theoretical Chemistry.** This course may be arranged for by students who have completed courses 7 and 8.

12. **Mineralogy.** Crystallography, the study of minerals and blowpipe analysis may be taken concurrently or separately.

13. **Journal Meeting.** Once a week throughout the year, the officers of the department, with the more advanced students and such others as wish to, meet for papers and discussions upon topics representing the progress of chemical science, chiefly as found in the current journals. The preparation of subjects for presentation at these meetings is a part of the required work of graduate students.

#### MEANS OF ILLUSTRATION.

The equipment of this department was largely destroyed by fire, May 31, 1900. The most essential requirements have been replaced for both lecture-room and laboratory needs, and with the occupation of the new building next fall it is expected that the opportunities for work will be superior to any which the department has ever had previously. The collections, though largely lost, still include representative specimens of the most important ores and minerals, a set of natural crystals, a set of large glass crystal models, a collection of the minerals of the noted Stassfurth deposit, and chemical preparations illustrating subjects taught.



AGRICULTURAL HALL.

***Dairy Husbandry.***

1. **Dairying.** Second year, winter term. Milk—its secretion, nature and composition; testing milk, cream, skim-milk, buttermilk and whey; conditions influencing the quantity and quality of milk; handling of milk for market, butter-making, and cheese-making; hand and power separators; cream ripening; making and marketing butter; study of cows, calves, and feeds for the most economical production of dairy products. Text-book, *Testing Milk and its Products*, by Farrington and Woll; *Milk and its Products*, by Wing. Lectures.

2. **Milk-testing.** Industrial, second year, winter term. Practice in testing milk and its various products; detection of adulterated milk; tests for distinguishing oleomargarine and butter; testing accuracy of glassware; study of various makes of hand and power Babcock testers; different methods of testing the acidity of milk. Twenty hours per term.

3. **Butter-making.** Industrial, second year, winter term. Practice in receiving and separating milk; sterilizing skim-milk; pasteurizing, ripening and churning the cream; washing, salting, working, printing, packing, and marketing the butter; practice with various makes of hand and power separators; with different makes of cream ripeners, churns, and butter workers. Twenty hours per term.

4. **Cheese-making.** Industrial, second year, winter term. Rennet tests; setting the milk, cutting the curd, developing acidity; salting, pressing and curing the cheese. Twenty hours per term.

**MEANS OF ILLUSTRATION.**

Dairy apparatus valued at \$10,000, dairy herd \$5000, and model dairy barn at \$3000; four breeds of pure-bred dairy cattle, two breeds of general-purpose cattle, and fifty head of calves and young stock.

Experiments in feeding cows and calves are in progress during the year. Students in dairying are required to watch and report on these experiments from time to time.

In addition to the regular College equipment, manufacturers of separators, Babcock testers and other dairy supplies have loaned the College several thousand dollars' worth of machinery for instructive purposes.

**STOCK JUDGING.**

Winter term. Special instruction is given by prominent judges and successful breeders of poultry, beef cattle, dairy cattle, swine and horses. Ten breeds of cattle are represented on the College farm—Aberdeen-Angus, Galloway, Hereford and Shorthorn representing the beef breeds; Ayrshire, Guernsey, Jersey and Holstein-Friesian representing the dairy breeds; and the Polled Durham and the Red Polled representing the dual-purpose breeds. The College has a herd of thirty common cows.

Four breeds of swine have been donated by twenty-five different breeders of Kansas, each breeder sending what he would call a model animal. This furnishes an excellent opportunity to study the ideals of successful breeders.

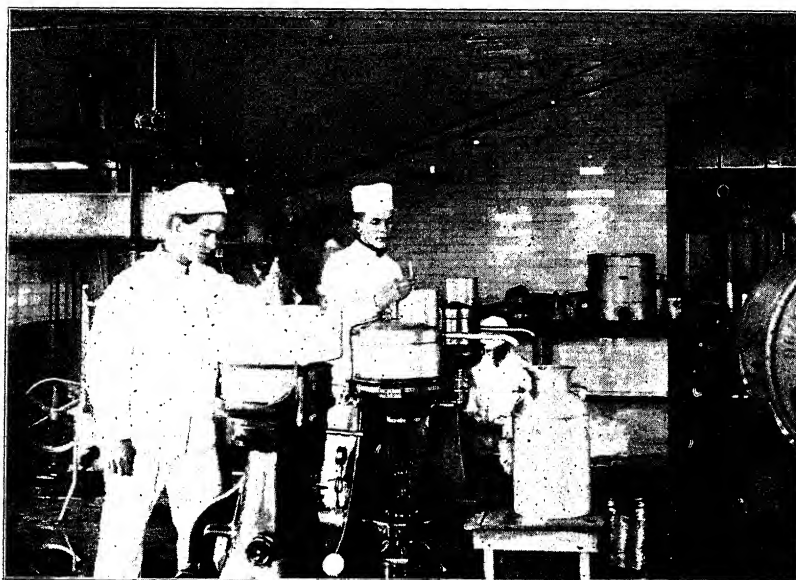
Several breeds of poultry are owned by the College, and the fanciers around Manhattan loan all the birds needed for judging purposes.

The College owns some fine Percheron horses, and, in addition, secures the loan of some of the best draft and driving horses in the state for judging purposes.

The judging room, forty-eight by ninety-six, is located in the large stone barn at the north end of the College campus, and has a seating capacity for 350.



JUDGING DAIRY COWS.



SEPARATING MILK.

*Domestic Science.*

Of the studies described below, Nos. 1 and 2 are required of all young women, and Nos. 4 to 10, inclusive, are required in the domestic science course. Nos. 5, 6 and 7 are elective for young women in the general science course.

1. **Hygiene.** First year, fall term. This course consists of lectures in elementary hygiene for women, and covers the care of the human body as well as the general principles of wholesome living.

2. **Elementary Cookery.** First year, winter term. Lectures, with weekly laboratory practice. The course includes the study of fuels, construction and management of stoves, and the effect of heat on the food principles in an elementary but typical manner.

3. **Household Economics.** Second year, fall term. Lectures, with laboratory practice covering the choice, use and care of utensils, also methods of general cleaning.

4. **Home Nursing.** Third year, fall term. This course includes the study of the care of adults and children in sickness and convalescence; aids in sudden illness and to the injured; contagious and infectious diseases, together with sanitary conditions and precautions.

5. **Domestic Science I.** Third year, fall term. The fall work opens with the preservation of fruits and vegetables in canning, preserving, and the making of jellies, jams, and fruit juices. Breakfast sequence. The effect of heat on the food principles used in breakfast dishes and beverages is followed by the preparation and serving of breakfasts, considering also quantities, food values, and costs. Text-books, Boston Cooking School Cook-book, Miss Farmer; Expert Waitress, Springstead.

6. **Domestic Science II.** Third year, winter term. Luncheon and supper sequences. The cookery of luncheon and supper dishes is followed by a study of food combinations in bills of fare, and the serving of luncheons and suppers, together with discussions of food values, quantities, and costs. Text-book, same as for Domestic Science I.

7. **Domestic Science III.** Third year, spring term. Dinner sequences and dietaries. The first part of the term is occupied in the cookery of dinner dishes, construction of bills of fare, and the serving of the dinners, together with a study of food values, quantities, and costs. The last part of the term is spent in a study of dietaries. Text-book, same as for Domestic Science I.

8. **Therapeutic Cookery.** Fourth year, fall term. This work comprises special cookery for the sick, and the various ways of administering food to the sick and convalescent. Text-book, Food for the Sick, Doctor French.

9. **House Furnishings and Care.** Fourth year, winter term. This course consists of a study of furnishings; color combinations; fabrics and textiles; daily household routine; and household accounts. Text-books, Home Economics, Parloa; Laundry Manual, Balderstein.

10. **Demonstrations.** Fourth year, spring term. Each student is required to give a demonstration lecture in cooking before the class, and give approved recipes. The student may select one assistant from the class to assist in the general details of the work. To accompany this there will be advanced work in foods and dietaries.

### *Domestic Art.*

This department provides a systematic course in plain sewing, dressmaking, and millinery.

The course of work in plain sewing is carefully graded, not only to insure a thorough knowledge of the subject, but to develop habits of order, accuracy, and self-reliance. Each pupil is required to keep a note-book in which she records a description of the work accomplished. A written examination is held at the end of each term.

Of the studies described below, all young women are required to take Nos. 1, 2, and 3, and those in the domestic science course must take No. 5.

Materials for No. 1 are furnished by the College, the pupil furnishing her own thread, needles, thimble, etc. In Nos. 2, 3, 4, and 5, the pupil furnishes her own materials and makes the garments for herself.

1. **Sewing I.** First year, fall term. The pupil makes a book of models, covering the full course in hand sewing, and consisting of basting, hemming, gathering, darning, patching, etc.

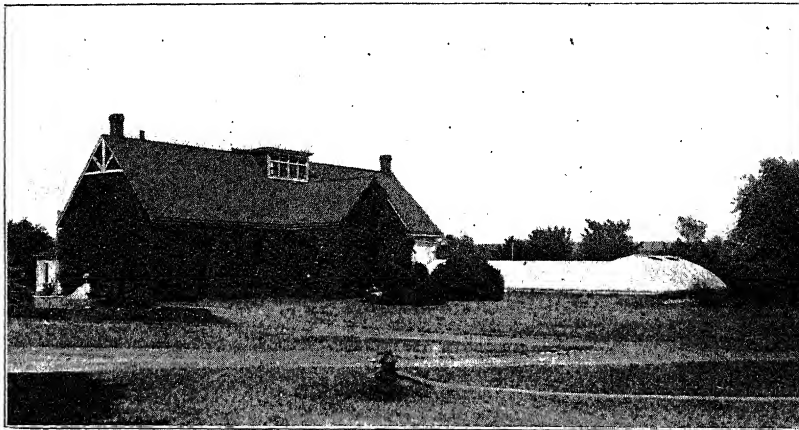
2. **Sewing II.** First year, winter term. Machine practice; drafting, cutting and making underskirt and drawers.

3. **Sewing III.** First year, spring term. Drafting, fitting and making dress without lining.

4. **Sewing IV.** Second year, fall term. Cutting and making corset cover and night dress.

5. **Dressmaking.** Second year, winter term. Nos. 1, 2 and 3 are a prerequisite for this course. The use of a dress cutting system is taught, and each pupil will be required to draft, cut and make a woollen dress for herself. Ten hours per week are devoted to class work and about three hours' home work is required per week.

6. **Millinery.** Fourth year, spring term. Renovating felt and straw hats, velvets, silks, and ribbons. Trimming and wiring hats; cutting and putting on facings, both plain and shirred; fold and bow making. Practice trimming; trimming final hat. Pupils will be expected to bring in two old hats, one felt and one straw, for practice work.



HORTICULTURAL HALL.

*Drawing, Descriptive Geometry, and Architecture.*

Drawing is the language of form and the key to every artistic and nearly every industrial pursuit. The educational and practical value of an extended and systematic course in its various branches can hardly be overestimated. The general aims of the several courses in industrial art are the same: (a) The cultivation of observation and analysis of form; (b) the development of correct taste; (c) the teaching of the different methods of graphic representation; (d) the acquirement of skill in handling drawing tools.

Of the studies described below, Nos. 1 to 8, inclusive, are required in the mechanical and electrical engineering courses; Nos. 1, 2, 3, 8, 9, and 10, in the general science course; Nos. 1, 2, 3, and 11, in the domestic science course; and Nos. 1; 2, and 3, in the agriculture course.

The College furnishes drawing-board, T square, triangles and water-colors for the graphic work done at the College; but all tools for home use, including drawing-board, T square, triangles, compasses, shading pen, and protractor, must be furnished by the student.

1. **Free-hand Drawing.** First year, fall term. Exercises with forms involving the right line and the arc, illustrating the effects of geometrical arrangement, repetition, alternation, symmetry, proportion, harmony, and contrast. After a few lessons in geometrical lines, the conventional surface ornament is taken up, and more subtle curvatures and complex forms are introduced. Text-book, Walters's Industrial Drawing, envelopes 2 and 7.

2. **Geometrical Drawing.** First year, winter term. Construction of perpendiculars, parallels, angles, polygons, tangents, etc. Construction of the ovoid, oval, ellipse, and spiral. Drawing, in India ink and water-colors, of various geometrical designs and architectural forms. Use of drawing-board and T square. Text-book, Walters's Industrial Drawing, envelopes 11 and 12.

3. **Primary Object Drawing.** First year, spring term. Discussion and drawing of geometrical models and simple objects. Exercises in shading from the object and from imagination.

4. **Orthographic Projection.** Second year, fall term. Principles of orthographic projection; the profile plane; the secant plane; rotation in space; change of ground line. Development of surfaces. Interpenetrations of the prism, pyramid, and polyhedron. Projection of the circle, cylinder, and cone. Exercises in pen and brush shading.

5. **Orthographic Projection.** Second year, winter term. Construction and projection of the conic-section lines. Construction of the cycloid, involute, spiral, cissoid, conchoid, curve of pursuit, helix, etc. Construction of screw forms. Interpenetrations of the cone, cylinder, and sphere. Shades and shadows of simple geometric forms. Exercises in pen and brush shading.

6. **Axonometry.** Second year, spring term. Problems in monodimetric and isometric projection. The approximate development of the sphere. Problems on the spheric triangle. Graphic investigations of the torus and its sections. Shades and shadows produced by local light. Exercises in pen and brush shading. Instruction and practice in the manipulations of the black- and blue-printing processes.

7. **Descriptive Geometry.** Third year, fall term. Discussion and solution of the usual problems relating to the point, right line, and plane. Generation and classification of lines and surfaces. Discussion and construction of tangents, normals, and asymptotes to lines. Study of osculation, rectification, and radius of curvature. Construction of tangent, normal and asymptotic planes and surfaces. Construction of tangents to curves of intersection. General character-

istics of warped surfaces. Graphic analysis of the hyperbolic paraboloid, the conoid, the hyperboloid of revolution, the cylindroid, the helicoid, etc. Construction of tangent planes to warped surfaces. Construction of tangent hyperboloids.

8. **Perspective and Sketching.** Third year, spring term. Linear perspective is taught as central projection, and is intended to furnish the scientific answers to the questions which constantly confront the student of drawing from the object. It comprises the subjects of vanishing points, vanishing traces, measuring points, cylindric perspective and perspective corrections, shades and shadows in perspective, studio methods. The models used in the work in sketching are objects of utility and beauty, whose forms bear close relationship to geometrical types. The students are led to recognize the facts, relations and principles involved in the apparent form of the object, to note the distribution of light, shade, shadow and reflection on the same, and deduce the general principles which the observation and comparison of these appearances are found to establish. Each student is required to make eighteen original crayon sketches during the term.

9. **Projection Drawing.** Third year, fall term. The third-year work in projection drawing of the science course is similar in character and scope to the second-year work of the engineering course, as described in paragraphs 4 and 5.

10. **Advanced Object Drawing.** Fourth year, spring term. Exercises in pen drawing, crayon and brush shading, architectural and machine drawing, illustrating thesis work, at the option of the student.

11. **Home Architecture.** Third year, winter term. This study is taught by lectures covering the following topics: Location of the home; landscape surroundings; roads, walks, fences, and outbuildings; the individuality of the home; building materials; the historic development of the dwelling-house; foundations and basement; the arrangement of the main-floor rooms; the roof and attic; heating and ventilation; water-supply; water-closets, cesspools, and other drainage problems; paint and varnish; interior decoration; the school-house. Each student is required to design a set of plans, elevations and details of a residence, with modern provisions for heating, ventilation, and drainage.

12. **Architectural Course.** The courses of study for all engineering branches must necessarily be the same with regard to work of a preparatory or general character, but differ with regard to the professional branches. Students who intend to take architecture in place of mechanical engineering may substitute architectural studies for the strictly professional work of the third and fourth years of that course. The department of industrial art is well equipped to teach the branches named. It owns a rapidly growing collection of illustrative building material, complete sets of drawings and blue-prints of most of the Kansas state buildings, a photographic camera, a dark room equipped with running water and ruby light, etc. The substantial buildings of the institution and its complete system of heating and lighting furnish additional illustrative material.

### ***English Language and Literature.***

#### DEPARTMENT AIMS.

1. To create and increase a taste for reading.
2. To develop a careful and discriminating judgment regarding literature and printed matter.
3. To teach by examples the meaning and uses of the various forms of literature.
4. To increase the student's stock of words by an extended experience in word analysis, dictionary use, and language of history.

5. To give him actual practice in the exercise of many forms of composition, and thereby to develop facility in expressing himself.

6. To beget the historic sense while tracing the literature of the Anglo-Saxon race in its cause-and effect relations to the great events and movements of history.

7. To lead the student to a plane in which he may see language and literature as the most complete and most permanent index to the civilization of any people in any age.

8. To point out the vital connection between literature and life, and to inspire in the student such an appreciation of esthetic values as shall enrich and ennoble his life, be his vocation what it may.

Of the studies described below, Nos. 1, 2, 3 and 5 are required in all courses; No. 6 is required in the agriculture and mechanical and electrical engineering courses; No. 7 is required in the domestic science and general science courses; No. 4 is an elective in the domestic science course.

1. **English Readings I.** First year, fall term. The careful study of a number of standard authors, of first-class interest and easy style. As far as possible, the selections are read and discussed in class. Character sketches, paraphrases, abstracts and analyses are frequently required, so that the students are not only given continual opportunity of rendering and hearing the best thought in the best forms, but are, at the same time, encouraged to develop their own thought and skill in abridged reproductions. With these objective readings, the student learns to distinguish various forms and styles of literature, and to note the qualities of thought and expression.

FALL-TERM CLASS READINGS.

Benjamin Franklin's Autobiography; Irving's Sketch Book; Shakspeare's Julius Cæsar; Goldsmith's Deserted Village; Byron's Prisoner of Chillon; Arnold's Sohrob and Rustum; Burns's Representative Poems; Scott's Lady of the Lake; Words of Abraham Lincoln.



BOOK STOCK ROOM.

2. **English Readings II.** First year, winter term. This is a continuation, with new authors, of the work begun in the fall term.

WINTER-TERM CLASS READINGS.

Longfellow's *Evangeline*; Coleridge's *Ancient Mariner*; Tennyson's *Princess*; Emerson's *American Scholar*, *Self-reliance*, *Compensation*; Shakspeare's *Merchant of Venice*; Dryden's *Palamon and Arcite*; Johnson's *Rasselas*; Lowell's *Vision of Sir Launfal*.

3. **English Themes.** First year, spring term. The work of this term is an extension and application of that begun in composition. As far as possible the natural method is pursued. The student is encouraged to write freely upon subjects that appeal to him and that spring spontaneously from the activities and interests of his daily life, without severe restraint at first, or strict regard to the formal rules of rhetoric. When once the fear and dread of writing have been somewhat overcome, and he has learned that, after all, writing is not very different from talking, and that it may become real fun if he choose to make it such, the instructor begins to practice the pruning process more and more strictly. It is believed that successful instruction in this subject depends not so much upon precept as upon example and practice. The chief aim is to keep the student interested and to keep him writing in accordance with the best models of English style. To this end the instruction is made extremely flexible, and freshness and variety of method are constantly sought.

4. **American Literature.** Second year, winter term. The work of this term will consist of a rapid survey of the rise and development of American authorship from colonial times to the present. Due attention will be given to the lives of the representative men of letters, for it is believed that the works of our great writers will not be fully appreciated until the authors themselves have been made to live in the thought and affection of the reader. Many of the shorter poems and sketches of our chief poets, essayists and story writers will be read and discussed in class, while a number of the longer classics will be assigned for outside reading and analysis. The method of instruction will include both text-book and lectures.

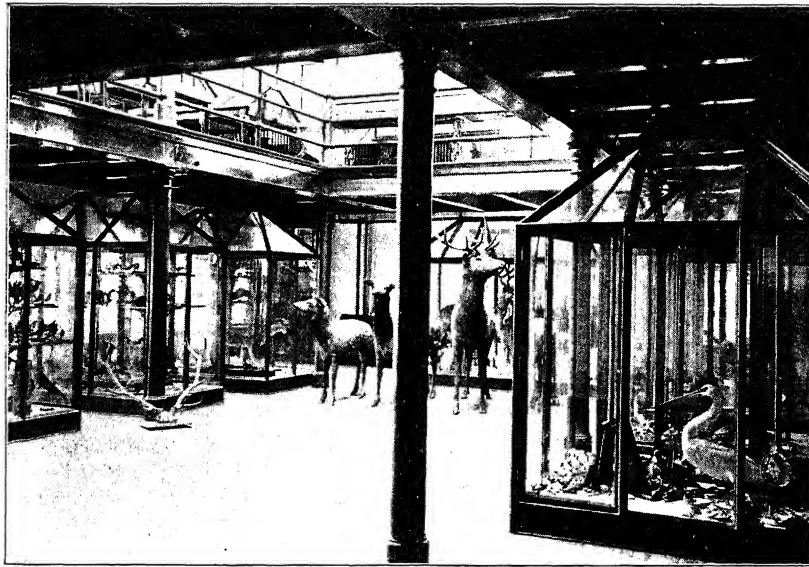
5. **Rhetoric.** Third year, fall term. This includes the philosophy and analysis of the principles involved in the various kinds of literary art. It covers a comparison of the ancient and modern ideas of the subject; the meaning of rhetoric as a science and as an art; the nature and differences between the many kinds of style; the elements which go to make up these; the characteristics and uses of the great divisions—prose and poetry; the grand problem of the material and thought, or of the content of discourse of whatever sort, how to get it, how to handle it; how to limit a subject, how to expand a theme, and how to stop. The work will be partly by lectures, partly by text-book study, partly by examining examples in the standard authors, and partly by written work from the students.

6. **English Literature.** Fourth year, spring term. A brief survey of the principal facts in connection with the rise and development of English literature, together with lectures upon the chief English writers, and a careful study of the thought and literary form of some of the great masterpieces from Shakspeare's time to the present.

7. **English Literature.** Fourth year, winter and spring terms. The purpose of this course is threefold: To trace the rise and growth of English literature from its beginning until the present time; to introduce the student in a modest and elementary way to the various aspects and species of literature and

to the artistic problems involved in an appreciative study of the great classics of the language; and, lastly, to study and analyze in chronological order a number of the famous masterpieces of English literature in accordance with sound principles of taste and interpretation. Pancoast's Introduction to English Literature will be taken as a guide, but there will be no slavish adherence to the text. The instruction will be varied by occasional lectures from the professor in charge, and the presentation, from time to time, of thoroughly prepared papers by members of the class. At all times the utmost freedom of discussion will be invited. A few of the great classics will be read, analyzed, and interpreted in class, while others will be assigned for private reading.

Especial stress is all the way laid on finding the elements of beauty and moral power in every production read. All together, it is hoped that this extended excursion along the most considerable stream of the world's literature may prove an inspiration toward noble and earnest life; may show the power of language and the imperishable character of its more beautiful forms; may reveal something of the mode and meaning of social advance and civilization, and be to the student in after-life a well-spring of pleasure and profit.



MUSEUM.

*Entomology, Zoology, and Geology.*

1. **Entomology.** Second year, spring term. In the work of this term, the intention is to give the student a basis for the intelligent appreciation of the important relations of the science to agriculture and horticulture. A brief view of structural types precedes an outline of insect classification, and a special study of the economic bearings of the subject completes the work. Illustrative material is furnished from the individual collections of the students and from the College museum. Charts, dissections, and drawings from nature are used to illustrate points of value in classification. The pocket lens used in botany is required in this study. Text-book, Comstock's Manual for the Study of Insects, abridged.

2. **Advanced Entomology.** Fourth year, elective. Courses are offered in the following lines: Review of the general subject, with the text-book, Comstock's Manual, extended. This work is desirable as preliminary to work in systematic or economic entomology. Entomological methods, including field-work in observation and collection, laboratory work in preparation, dissection, and preservation, and in the study of life-histories, by the aid of the vivarium. The independent and critical study of systematic entomology, the work in which may be restricted, when desired, to groups of special agricultural importance. Economic entomology, so far as relates to the insects of field and garden, with a special study of methods of repression.

3. **Zoology.** Third year, fall, winter or spring term. This course is an introduction to the study of animals—their structure, functions, habits, origin, relationships, and classification. The student is first introduced to the simplest forms of animals, in which structure and function are expressed in their simplest terms. From the consideration of these he passes in a natural manner to the study of higher and more complex forms, thus obtaining a knowledge of the gradual differentiation of structure and correlative specialization of function so clearly illustrated by the study of types. Special attention is paid to animal ecology, *e. g.*, the relation of animals to their environment, effects of climate, soil, etc.; parasitism, commensalism, symbiosis; natural and artificial selection; the interdependence of species, and the caution which must be observed in interference with these natural relations. This course must be preceded by organic chemistry and physiology.

## MEANS OF ILLUSTRATION.

The zoölogical museum, containing numerous representatives of the several classes, especially full in fishes and mollusks of Kansas and in illustrations in economic and systematic entomology. Increasing material in skins, alcoholic and anatomical preparations are available also for the use of the student.

3. **Geology.** Third year, spring term. In this study, required in the general science, domestic science and agricultural courses, attention is chiefly given to the subject of physical geology, with a brief view of the arguments and basis of the historical phase of the science. The illustrative collections embrace ample series of specimens, including the College collection of rocks, the stratigraphical collection, and the collection illustrating phenomenal geology, all from the Ward establishment; the educational collection, from the United States Geological Survey; and a valuable series of rocks and rock-forming minerals from the national museum. To these are added numerous specimens, especially from Kansas localities; and a small but increasing representation of characteristic fossils is also open to the student.

### ***History and Economics.***

Whatever occupation in life men may adopt—whether they become farmers, lawyers, teachers, or merchants—they are first of all citizens. For this reason the College offers to its students instruction in those subjects which fit them in a special manner to discharge the duties which they owe to their state and to the nation, and to form an intelligent judgment concerning the public questions which, as voters or perhaps as officers, they will be called upon to meet. The work of this department is arranged with this end in view.

Of the studies described below, all, except No. 6, are required in all courses.

1. **General History I.** Third year, fall term. An outline of European history from the fall of Rome to the beginning of the Protestant reformation. Special attention will be given to the development of institutional life, particularly the growth of the English constitution, the influence of the crusades and the beginning of the renaissance. Text-book, Adams's European History.

2. **General History II.** Third year, winter term. A continuation of course 1, extending as far as the congress of Vienna. The Protestant reformation, thirty years' war, rise of modern nations, development of absolutism, and the cause of the French revolution will be the chief topics here. Text-book, Schwill's Modern Europe.

3. **General History III.** Third year, spring term. Beginning with the congress of Vienna, the chief movements in the history of Europe are studied, with a view to explaining the existing condition of European politics. Particular attention is devoted to the progress of democracy in England and on the continent, especially in so far as it is reflected in the form of government. There is also considerable discussion of foreign topics. Text-book, Signobo's.

4. **Civics.** Third year, winter term. This course is given by lectures and text-books, and involves a study of the formation of the constitution, the organization and methods of the federal, state, and local governments, the most important sections of the state and federal institutions, and a discussion of current topics in politics and legislation. Text-books, Andrew's Manual of the Constitution, Boyd's Cases.

5. **Economic Principles.** Fourth year, fall term. This course is an introduction to the general subject, with elaboration of certain aspects. Care is taken to compare conflicting views and to point out sources of information on all sides of vexed questions. Sound thinking rather than the dogmatic teaching of certain views is the object sought. Text-book, Walker's Political Economy, briefer course.

6. **Constitutional Law.** Third or fourth year, spring term. This course is an elective for those students of the third and fourth years who have had civics. In it, during the first half-term, some of the leading decisions of the supreme court interpreting the constitution are studied. In the second half-term, lectures are given on the principles of international law. Text-books, Black on the Constitution, Cases on Constitutional Law.

### ***Horticulture.***

It is the object of the department to give such instruction and practice as will enable students to become acquainted with the general principles of plant culture and the application of these principles. Students in the agriculture course are assigned to three terms of class work (1, 2 and 3), and two terms of industrial work during the course. The work is planned to give them such

knowledge of horticulture as will best help to increase the comforts, beauties and profits of life on the farms. The young women of the domestic science course are assigned to classes in 1 and 4, and may elect one term in ornamental gardening.

Students in the general science course are assigned to 1, and may elect industrials through the last three years of the course, and other subjects during the terms when classes are formed.

1. **Principles of Horticulture.** Second year, fall term. The work of this term presents the principles of the art, introducing the facts underlying methods of propagation, nursery, orchard, and garden treatment; the handling, storing and marketing of fruits. The text-book, Goff's Principles of Plant Culture, is supplemented by lectures.

2. **Vegetable-gardening and Small-fruit Culture.** Third year, spring term. The work of this term is given by lectures, and is devoted to methods of field operations with special attention to seasonable practice, including the use of manures, the application of fungicides and insecticides, the means of securing and maintaining sanitary conditions, and a detailed study of varieties, with reference to their adaptation to local conditions.

3. **Advanced Horticulture.** Fourth year, winter term. The work of this term consists of lectures and library research work on topics assigned by the instructor. The objects of the work of this term are to present specific methods of propagation, the means of plant improvement, the influence of culture and manures, the management of hotbeds and various glass horticultural structures, and the general work of forcing vegetables and flowering plants. The library research work gives the student opportunity to become somewhat familiar with the history of horticulture and to widen his acquaintance with horticultural works and reports.



"LOVERS' LANE."

4. **Floriculture.** Third year, winter term. This subject, open to young women of the domestic science course, includes general greenhouse work in propagating, potting and caring for plants, window gardening, the growing of plants in the open air, the treatment of bulbs, annuals, and perennials, and the destruction of plant pests. Practice work alternates with lectures on these topics.

5. **Industrial Horticulture.** Second year, fall term. The practical work of this term is largely devoted to the seasonable operations of gathering and storing seeds, fruits and vegetables, the preparation of vegetables for market, the winter protection of garden plants, small fruits and ornamentals, fall work in orchard and vineyard, and selection and preparation of material for propagation.

6. **Industrial Horticulture.** Third year, winter term. The practical work of this term is devoted to indoor methods of propagating fruit and ornamental trees and shrubs, winter pruning of fruit and forest-trees, and forcing-house work with vegetables.

ELECTIVES.

**Pomology.** Fall term. The work of this term comprises a careful study of varieties of fruit, the means of identification, their variation, in plant and fruit, under different conditions of soil and culture, and their botany and history. The same work with the small fruits may be carried on during the spring term.

**Elementary Forestry.** In the work of this term a study is made of the methods of propagating and planting forest trees, the identification of trees and tree seeds and the value of various species in different soils and situations.

**Advanced Forestry.** The work on this topic is made more or less detailed according to the opportunity of the student to devote one or more terms to the subject. The value of the different trees for specific purposes, windbreaks, posts,



MAIN ENTRANCE.

fuel, and timber; their rate of growth, distance for planting, ability to tolerate shade, the methods employed by various governments for the protection and extension of forests and microscopic examination of the structure of woods are among the topics considered.

**Ornamental Gardening.** The principles of this art are studied in relation to their application to the planning and planting of home grounds, streets, parks and cemeteries. The value of the various trees, shrubs, annual and perennial herbaceous plants for securing desired effects are taken up in detail with special reference to their use under differing climatic and soil conditions. Graduate students or those electing more than a single term's work in this subject, study in fuller detail the foregoing topics and also the propagation, training and general culture of the various plants.

**Industrial Horticulture.** Students who elect practical work in horticulture are given more detailed instruction in the work outlined in the regular industrial work, and to more advanced work in orchard, garden, nursery, and forcing-house, and in the use of spraying apparatus. Special industrial work in floriculture may be arranged for by either young men or young women. Graduate students who elect horticulture as their major study may devote more than one term to work in the subjects mentioned, and may have other classes arranged in orchard management and the means of maintaining sanitary conditions. A term's work in the literature of horticulture gives added opportunities for acquaintance with standard works and writers upon various subjects.

#### MEANS OF ILLUSTRATION.

Orchards comprising seventy-five varieties of apples, forty of plums, thirty of peaches, fifteen of cherries; plantations of native fruits; small-fruit plantations, containing many varieties; vineyards containing 175 varieties and six forms of trellises; a large collection in the arboretum and on the grounds of shrubs and timber, shade and ornamental trees; about thirty acres of forest plantings; fifteen acres of nursery and garden; a large collection of native and foreign plants, in greenhouses; a collection containing 200 models of fruit; a grape herbarium containing leaves, canes, seeds, and photographs of the fruit of 175 varieties of grapes; collections and specimens of woods; herbarium of fungous diseases, and numerous charts. The general library and the department library furnish ample opportunity for research work in various lines.

#### *Mathematics.*

It is the aim of the department of mathematics to give a thorough training in a small number of subjects, and to develop in the student the ability to attack new problems, rather than to burden his mind with a large number of facts or special methods. It is also characteristic of the methods of the department that an attempt is made to give the mathematical subjects a touch of human interest by directing the attention of the student to the historical development of these subjects. The following statement contains a brief description of the courses to be given next year:

1. **Algebra II.** First year, fall term. Text-book, Wells's New Higher Algebra. Simple equations with more than one unknown quantity; involution, evolution, theory of exponents, radicals, and quadratic equations with one unknown quantity.
2. **Algebra III.** First year, winter term. Quadratic equations completed, ratio and proportion. Arithmetical and geometrical progression.

3. **Geometry I.** First year, spring term. Text-book, Gore. First, second, third and fourth books, with exercises for original demonstration.

4. **Geometry II.** Second year, fall term. Continuation of course 3. Fifth, sixth, seventh and eighth books, treated as before, with special attention to original work.

5. **Trigonometry.** Second year, winter term. Text-book, Wentworth. Solutions of plane triangles; essentials of goniometry; applications to surveying and navigation.

6. **Surveying.** Second year, spring term. Field work, two hours per week. Use and adjustment of instruments. Chaining, leveling, and land surveying. The data for a definite series of problems laid out during course in trigonometry of the winter term are obtained in the field; results platted and computed.

7. **Higher Algebra.** Second year, spring term. Text-book, Wells's New Higher Algebra. Binomial theorem, undetermined coefficients, logarithms, and general theory of equations.

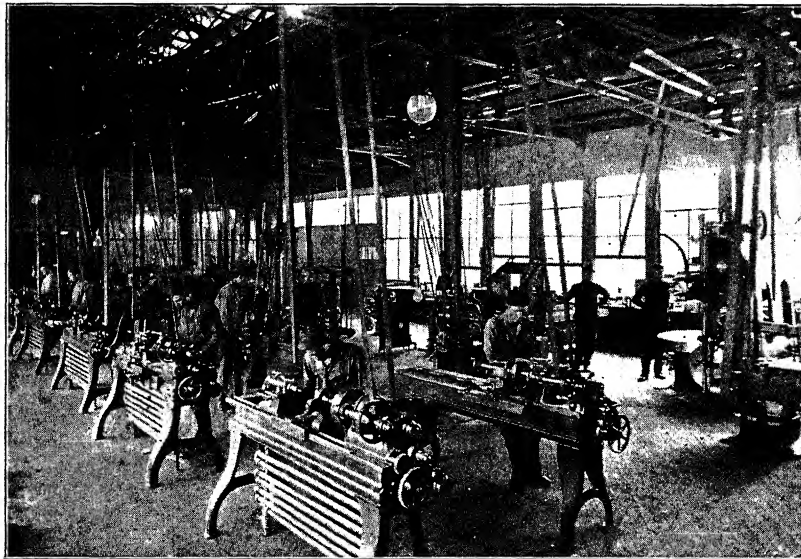
8. **Analytical Geometry.** Third year, fall term. Text-book, Wentworth. Rectangular and polar coördinates; the straight line, circle, ellipse, parabola, hyperbola, general equations of the second degree.

**Calculus.** Osborne's Calculus, with lectures.

9. Third year, winter term. Differentiation, with the usual applications to maxima and minima, mechanics, series, etc.

10. Third year, spring term. Integration, with applications.

In addition to the above, courses in theory of equations, differential equations, theory of functions or other branches of higher mathematics may be given to graduate students, or to undergraduates who are able to carry extra work.



MACHINE SHOP.

### ***Mechanical Engineering.***

In the mechanical engineering course all studies below are required but No. 10.

In the agricultural course, studies 1, 2, 3 and 10 are required.

In the general science course, 1, 2 and 3 are required, and additional shop-work is optional.

In the electrical engineering course, all studies are required except 10, 21, 24, 26, 30.

1. **Woodwork.** First year, fall term. A graded set of problems in joining, a working to dimensions, together with proper use and care of bench tools. Advanced practice in general woodwork, carpentry, cabinet-making, turning, and pattern-making; special attention being given to the making of patterns for machinery and apparatus to be constructed in the shops.

2. **Foundry.** First year, winter term. Foundry practice is given in both floor and bench molding, including the making of cores, brass and iron castings, and the mixing of special alloys. Cupola practice and the making of machine castings for shop use are included.

3. **Blacksmithing.** First year, spring term. A graded set of problems designed to teach the operations of drawing, upsetting, welding, and forming, accompanied with instruction in the care of fires, and the behavior of iron at different heats.

4. **Blacksmithing.** Second year, fall term. Advanced work in the forging of iron and the manufacture of steel tools. Instruction is given in tempering, case-hardening, and annealing.

5. **Kinematics of Machinery.** Second year, winter term. An elementary course in mechanisms, particularly the principles involved in the construction of gears, cams, and quick return motions. Text-book: Jones's Machine Design, volume 1.

6. **Machine-shop.** Second year, winter term. Practice in chipping, filing, scraping, and laying out work from drawings.

7. **Shop Lectures.** Second year, winter term. Lectures are given twice a week on the construction, use and care of shop tools, and on shop methods.

8. **Mechanics.** Second year, spring term. A course in elementary mechanics, including the laws of motion, force, work, and energy, together with the composition and resolution of forces. Preparation required, trigonometry. Text-book, Dana's Elementary Mechanics.

9. **Machine-shop.** Second year, spring term. A continuation of the work of the previous term, with exercises in lathe work.

10. **Agricultural Mechanics.** Third year, fall term. Advanced instruction in machine-shop is given to agricultural students. This instruction includes bolt making, grinding, sharpening, screw setting, and repairing of agricultural machinery. It is supplemented by lectures and practical instruction in the operation of traction-engines.

11. **Mechanical Drawing.** Third year, fall term. Exercises in lettering, shading, and the drawing of simple mechanisms.

12. **Machine-shop.** Third year, fall term. Instruction in advanced lathe work, gear cutting, and boring.

13. **Mechanical Drawing.** Third year, winter term. The design of cams, gears, and quick return motions.

14. **Machine-shop.** Third year, winter term. Advanced work on lathes, planers, milling-machines, and boring-mill, including tool making.

15. **Machine Design.** Third year, spring term. A study of the principles involved in design, and the solution of the problems. Preparation required, kinematics and mechanics. Text-book, Jones's Machine Design, volume 2.

16. **Mechanical Drawing.** Third year, spring term. The work in drawing accompanies the class work in machine design.

17. **Engine Running.** Third year, spring term. The work of this term consists of instruction in the operation and care of boilers and engines, and exercises in steam-fitting.

18. **Applied Mechanics.** Fourth year, fall term. The application of the principles of theoretical mechanics to problems arising in practice. Preparation required, third year machine design and calculus. Text-book, Goodwin's Applied Mechanics.

19. **Steam Engineering.** Fourth year, fall term. A course in elementary thermodynamics, valve gears, and steam-boilers. Preparation required, calculus. Text-book, Kinealy's Steam-engines and Boilers.

20. **Machine Design.** Fourth year, fall term. The design of the valve motion and reciprocating parts of the steam-engine. The work in the drawing-room is designed to accompany the classroom work in steam engineering.

21. **Engineering Laboratory.** Fourth year, fall term. Experiments in valve setting, engine tests, efficiency of hoists, gage tests, etc. Preparation required, third-year mechanics and steam engineering. Text-book, Smart's Laboratory Practice.

22. **Machine-shop.** Fourth year, fall term. The time of this term is devoted to the building of a small machine, or making the parts of a large one.

23. **Applied Mechanics.** Fourth year, winter term. A continuation of the work of the previous term, including a study of the strength of materials.

24. **Engineering Power Plants.** Fourth year, winter term. A course in the construction, management and operation of prime movers, including a study of the construction of shop, buildings, and power-houses. Preparation required, steam engineering. Text-book, Hutton's Mechanical Engineering Power Plants.

25. **Machine Design.** Fourth year, winter term. The design of a complete machine or engine, an application of the principles studied in steam engineering and applied mechanics.

26. **Engineering Laboratory.** Fourth year, winter term. A continuation of the previous term's work, with practice in running boiler tests. Preparation required, steam engineering.

27. **Machine-shop.** Fourth year, winter term. A continuation of the previous term's work.

28. **Applied Mechanics.** Fourth year, spring term. A course in the mechanics of fly-wheels and governors, and a study of the laws of friction.

29. **Hydraulics.** Fourth year, spring term. The term's work includes a study of the principles of hydrostatics and the action of water-motors.

30. **Engineering Design.** Fourth year, spring term. The design of a power plant or factory, based upon the work of the previous term in engineering power plants.

31. **Thesis.** Fourth year, spring term. Engineering students are required to present, for graduation, a suitable thesis on some subject relating to their work. Practice in the machine-shop is omitted in this term, and it is considered that the thesis work should occupy at least ten hours per week.

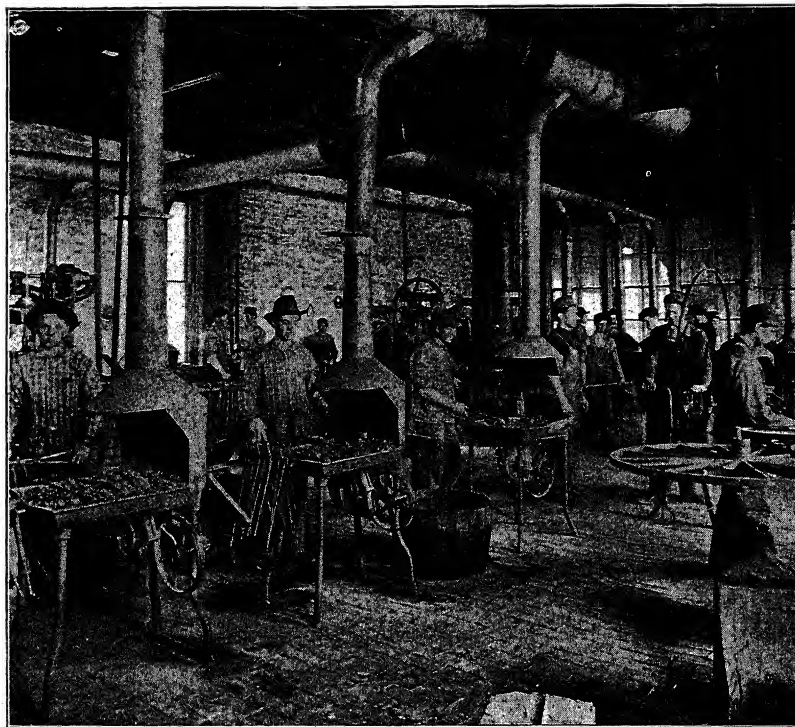
## EQUIPMENT.

The shops of the Kansas State Agricultural College are furnished with the best modern machinery and tools for working both wood and iron, and are in operation six days per week throughout the year.

WOOD SHOP.—The wood-working room is 40 x 103 feet, contains 220 separate kits of tools, and benches for fifty students in each class; lathes, planer, circular saw, friezer, mortising machine, grinders, and tool room containing all kinds of wood-working tools for general use, together with complete outfit of wheelwright's tools.

MACHINE-SHOP.—This room is 40 x 80 feet, contains twelve fourteen-inch engine-lathes, one sixteen-inch combination engine and turret lathe, speed lathe, Gray planer, Hendy-Norton shaper, Brown & Sharpe No. 2 universal milling-machine, Walker universal grinder, special drill grinder, key seater, bolt-cutter, pipe machine, vertical drills, fifty-one inch vertical turning and boring mill, benches and tools for fifty students, and a complete stocked tool room, equipped with the finest modern tools.

BLACKSMITH SHOP.—This room is 40 x 50 feet, equipped with twenty-four forges fitted with power exhaust. Each forge has anvil and complete set of smithing tools. In addition to the general tools for a fully equipped blacksmith shop, there are also installed here power punch and shears, cold saws, and a number of pieces of special apparatus built by the department.



BLACKSMITH SHOP.

IRON FOUNDRY.—This room is 40 x 50, equipped with two-ton cupola, core oven, an exceptionally large number of flasks, ladles, traveling hoists, etc. The foundry makes all castings for machine building, together with boiler fronts, grate-bars, and special repair work.

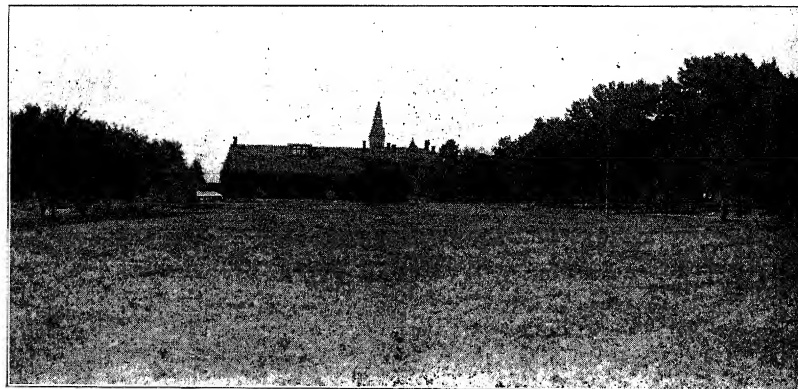
BRASS FOUNDRY.—This room is 16 x 30 feet, with crucible furnace flasks, and complete equipment for bench and floor molding. The product consists of bearings, friction metal, valves, fittings, etc.

PIPE-FITTING ROOM.—This room is 18 x 50 feet, contains a motor-driven Jarrecki pipe machine, and is completely equipped with tools used by steam-fitters. Practice in pipe-fitting and steam-fitting is given.

ENGINEERING LABORATORY.—This room is 35 x 40 feet, and contains a great variety of apparatus, among which may be specified a 100,000-pound testing machine, both automatic and autographic; Flather transmission dynamometer, for determining the power required by various machines; complete cement-testing outfit; absorption brakes; steam indicators; gauge-testing apparatus, and a variety of special machines for the testing of material; also, thermometers, calorimeters, speed indicators, etc. The very complete boiler- and engine-room adjoining the laboratory afford special opportunities for the work relating to steam engineering.

POWER PLANT.—The boiler-room contains five 60 horse-power horizontal-return-flue boilers, one 100 horse-power boiler, pumps, steam-traps, etc. These boilers are used for the generation of steam, both for power and heating purposes, and are independently connected, that they may be tested individually or in groups. The engine-room is equipped with one 100-horse-power, medium-speed engine, directly connected to a 60 K. W. multipolar generator, with marble switchboard and complete apparatus; one 50 horse-power Ball & Wood engine, belted to bipolar generator, with switchboard; one 10-horse-power Atlas engine; one 5-horse-power generator, built in the shops, for testing purposes; one Shipman coal-oil engine, and several small dynamos for testing purposes. In connection with the power plant is a very complete rope-driven installation, especially designed for the department.

CLASSROOMS.—On the second floor of the wood-working department are found the classrooms, drawing rooms, photographic rooms, paint room, varnish room, and pattern-storage room.



DRILL GROUND.

### *Military Training.*

**Tactics.** During the winter term of the first year the cadets have one lesson per week in the "Drill Regulations of the United States Army." This includes a study of the soldier, the squad, and the company, and their organization and movements.

**Military Science.** Three hours per week are devoted to the study of the elements of military science during the winter term. The recitations and lectures embrace the elementary principles that govern the art of war, the disciplining of troops, military law, the use of small arms, and, in fact, give a practical knowledge of applied military science, such as an officer of volunteers should be conversant with when called into the field.

**Infantry.** Special attention is given to setting-up exercises, school of the soldier, company, and battalion, and such ceremonies as parades, reviews, inspections, and guard mounts.

**Artillery.** Manual of the piece, mechanical maneuvers, and practice firing with blank cartridges.

**Target Practice.** A good range gives excellent opportunity for rifle practice, which receives considerable attention.

**Signaling.** A class is instructed each year in the sending and receiving of messages by the flag system in use in the regular army.

The national government has supplied the College with 245 cadet rifles and an equal number of sets of infantry accouterments; also, two three-inch field-guns and carriages. Swords, target supplies and annual issues of ball and blank cartridges are also received from the general government. Each student buys his own suit, to be worn whenever he pleases. The following is a description of the suit: "This suit to consist of regulation blue cap with college emblem, blue blouse cut and trimmed in officers' style, gray trousers trimmed with black mohair braid."

**War Department Record.** At the close of the year the names of the three cadets most distinguished in military science and tactics are reported to the war department for insertion in the United States army register, and also to the adjutant general of the state.

**Organization.** The cadets are organized into a battalion of four companies and a band. The commissioned officers are chosen from the Senior and Junior classes, and the non-commissioned from the Sophomores. All students in the regular courses below the third year are required to take drill unless excused for physical disability.

### *Music.*

Recognizing music as a factor in education which is practical and elevating, and believing that the germ of artistic faculty exists in every normal person, the following unique and generous provisions have been made for its introduction into the several courses.

Pupils may take music for a single term or more. A full course, extending over four years, includes theory, notation, singing, voice culture, harmony, composition, instrumentation, and technical drill on one or more instruments. The College pianos and organs (limited in number) are used for daily practice; the other instruments must be provided by the pupils using them.

Instruction in music is furnished free, under the direction of the professor in charge, to all pupils in the College, as follows:

1. **Singing, Notation and Theory.** Classes will be organized at such periods as will best accommodate the pupils interested.

2. **Instrumental Music, Musical Theory, and Harmony.** Classes will be organized, for pupils in the regular courses, at such periods as will best accommodate them, under the following conditions:

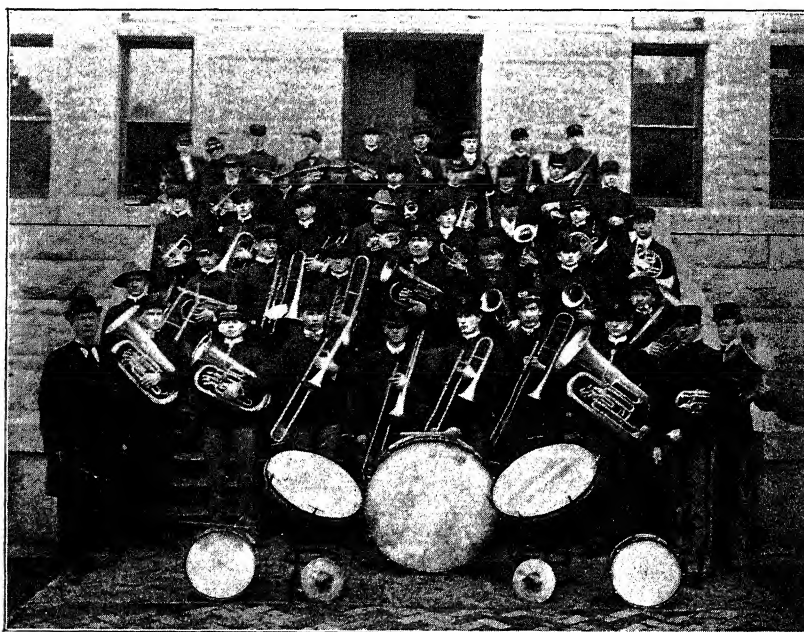
*a. Elective.* Music may be taken as an elective for the year in place of oratory by the members of the domestic science course. Students taking it as an elective will be required to furnish their own instruments, if they wish to practice more than one period.

*b. Industrials.* It may be taken as an industrial by ladies only, in connection with their notation and vocal music, after the required industrials of the first year, and after passing an examination equivalent to two terms in vocal music, in which case one period's daily practice at the College or at home is required.

*c. Extras.* It may be assigned as an extra to students, ladies or gentlemen, who do well in their general course of study, on the same conditions as above, excepting as to practice, when students may furnish their own instruments.

*d. Optional.* All music is optional—is taken at the choice of the student—but after assignment regular attendance is required as at other classes. Class organization shall be wholly under the control of the professor of music.

*e. Musical Organizations.* Each instrument has a distinct function in the science of tonal expression, and only in their combination are the finest effects in the coloring of the melody, harmony and rhythm procured. This combination is made possible in the musical department by the number of pupils and the variety of instruments studied. All students who are sufficiently advanced to join the College glee club, College orchestra, mandolin, guitar and banjo club, elementary band, or the College band, may become members by assignment.



CADET BAND.

*f. Public Exercises.* Music for commencement week and other public College exercises is furnished by the musical department, under the direction of the professor in charge, and all students in the department shall be subject to his call to assist in furnishing the same.

THE FOLLOWING COURSES ARE OFFERED.

**The Voice.** In the study of this instrument, the most natural and universal means of musical expression, notation is taught in connection with the establishment of a pure tone, in which there shall be resonance, volume, flexibility and expression. The instruction will include the rudiments of music, notation, sight-reading, ear-training, theory, harmony, voice culture, methods of teaching, practice in teaching, and drill in solo, quartet and chorus singing. Texts, Frederick Root's Elementary Exercises and Analytical Studies, Brown's Elementary Charts, Emery's Elements of Harmony, Weitzman's Theory, Randegger's Singing, Viardot-Garcia's Hour of Study. Select studies from Concone, Vaccai, Bordogni, Marchesi, and other standard works.

**The Piano.** In the study of this instrument, which occupies a place of so much dignity and importance in every musical education, great attention is given to every detail of *technique* and to the development of a correct touch, which is so necessary in giving intelligent expression to musical thought and feeling. It includes formation and position of fingers, hands, wrists, and arms, properties of touch, thorough drill in scale and Arpeggio playing, and exercises in accent, rhythm, and expression. The curriculum is chosen from the works of the standard composers, not omitting modern European and American writers, who best represent the modern spirit and progress. The following outline of a course of study, made with reference to the musical value of the selections, as well as to the special necessities of the pupil, may be followed or varied by the professor in charge. Text, selections from the following works or their equivalents:

*a. First year.*—Studies in position and touch. Plaidy, Czerny, Koehler, Mathew's Standard Studies I, II, III, Mason's Touch and Technic. Sonatinas by Clementi. Modern Pieces. Memorizing.

*b. Second year.*—Studies in development of technique, from Czerny, Heller, Loeschhorn, Lemoine, Mathew's Studies IV, V, VI. Sonatinas by Kuhlau. Mason's Touch and Technic. Cramer's Studies. Inventions by Bach. Modern Pieces. Memorizing.

*c. Third year.*—Kullak's Preparatory Octave School. Mathew's Studies VII, VIII, IX. Etudes by Moscheles. Clementi's Gradus ad Parnassum. Sonatas by Mozart, Beethoven. Modern Pieces. Memorizing.

*d. Fourth year.*—Kullak's Octave School. Tausig's Daily Studies. Mathew's Studies X. Bach's Preludes and Fugues. Sonatas and Concertos by Mendelssohn, Weber, Chopin. Concert pieces by Liszt, Schumann. Memorizing.

**The Cabinet and Pedal Organ.** The cabinet organ has a field of its own, and should have appropriate treatment, in many respects different from the piano. When properly played it is of much value in church and social circles. It is here taught so as to be preparatory to the piano, the pedal and pipe-organ. Text, Standard Schools. Selected studies and pedal studies, chorals, hymns and recreations suitable to the instrument.

**The Violin.** Particular attention is given to correct position, intonation and bowing; also to solo and orchestral playing. Text, selections from the following works or their equivalents:

*a. First Year.* Methods by Wichtl, Henning, and De Beriot, I. Exercises by Dancla, Pleyel, Papini, and easy solos. Memorizing.

*b. Second Year.* Schradick, book I; Kayser, book I; David, I; De Beriot, II, III. Art of bowing, Tartini; etudes of Kayser and Mazas, and easy solos. Memorizing.

*c. Third Year.* Schradick's school of technic; David, II; etudes of Kreutzer; sonatas by Mozart. Modern pieces. Memorizing.

*d. Fourth Year.* Hoffman's orchestra studies. Beethoven's sonatas. Solos by De Beriot, Leonard. Fantasias by Dancla, Singelee. Modern pieces. Memorizing.

**Orchestral and Band Instruments.** Similar courses of instruction are given on all the more important orchestral and band instruments—string, woodwind, and brass—also, mandolin and guitar. Opportunities are also furnished advanced pupils for orchestral, band, quartet and accompaniment playing. Text, selections from the standard methods, studies and recreations suitable to the instrument.

**Musical Theory, Composition, Instrumentation, and History of Music.** The aim of these courses is to give the pupil an intelligent conception of music as a science and an art and to lay a foundation for later studies which he may undertake in the field of artistic performance and of original work in musical composition. The instruction given includes theory, notation, harmony, counterpoint, composition, instrumentation, analysis of form and style, and musical history. Texts, Elson's Theory of Music, Brown's Prismatic Charts, Berlioz's Orchestration, Marx's Composition, Prout's Instrumentation, Mathews's History of Music.



LANE NORTH OF SHOPS.

### *Oratory.*

The work of this department is arranged with the special purpose in view of training students to gain knowledge, and then to make that knowledge of benefit both to themselves and to others. One of the fundamental principles of life is that "we must have before we can give; we must receive and possess before we can present; impression must precede and determine expression." The entire work of this department is based upon the principle that *all expression is the result of thought*. The greatest educational need of men and women to-day is the ability to present the knowledge that is theirs in an intelligent manner. We do not train students to read and recite as an end, but use the reading and reciting as a means to aid in the development of natural delivery of original thought. The *aim* of all work in oratory is *naturalness*, and in order to attain this, nature is studied and her methods are adopted.

The course here outlined is arranged in the logical order of the student's needs, and is as thorough and comprehensive as the time will permit. Studies Nos. 1 and 2 are given during two terms of all courses. Nos. 3 and 4 are given during two terms of the domestic science and general science courses, and the fundamental principles of each are given in connection with 1 and 2 in the other courses. No. 5 is required in the junior and senior years in all courses. For the amount of time required in each course, see "Schedule of Courses of Study" on another page of this catalogue.

1. **Oratory I. Vocal Expression.** In the arrangement of studies vocal expression is regarded as of primary importance, and is placed first because it brings the student to a study of himself and of nature and her processes. Vocal expression is the manifestation of the action of the mind through the voice. Observations are made of the action of the mind in thinking, the effect of thought upon the voice, and an effort is made to strengthen the thinking powers and to cause the voice to respond more freely to thought, feeling, and emotion. The aim is to stimulate the student, so that expression will be from within outward. Simple, direct and forceful expression through natural and easy modulations of the voice, is the standard. Definite problems are assigned to each student upon specific points of development.

2. **Oratory II. Extemporaneous Speaking and Debate.** It is of the utmost importance that students should be trained as early as possible to think and speak upon their feet. Many there are who show great ability in the delivery of the productions of others, or even their own, after having committed them, but who cannot give even so much as an introductory sentence extemporaneously. Few are the opportunities for delivering a committed speech, but numberless are the occasions that demand the expression of thought extemporaneously. Extemporization requires the most thorough preparation, which, added to the spirit of the occasion, will result in a spontaneous outburst of eloquence that is not possible in the delivery of committed matter. It is placed second in the course only because a student must first learn to think and to reveal thought, before attempting to enlighten or persuade others.

3. **Oratory III. Vocal and Pantomimic Training.** Voice is studied as a musical sound made by an instrument which acts as an agent of the mind. It is modulated by thought, feeling, and character, and its beauty and harmony depend upon the correct use of the instrument. Perfect music is impossible without a perfect instrument, and since the whole body is included within this vocal instrument it is necessary that work in harmonic and pantomimic training should go hand in hand with vocal training. Technical exercises are given for

the eradication of all faults, the securing of control, the stimulation and harmonious improvement of mind, voice, and body.

4. **Oratory IV.** Imagination and Dramatic Instinct. "Imagination," says Fénelon, "is the only creative faculty of the human mind." The aim of this course is to bring the mind of the student into direct contact with the noble works of literature; not merely to analyze the thought and construction, but stimulate and awaken the faculties in the student, which were awake in the writer, to study the processes of the mind in creating and assimilating ideas for the true artistic interpretation of literature by the living voice. It is intended as a forerunner and companion to the study of literature by making practical vocal interpretation one of the chief means of coming to a realization of the spirit of literary work. The principle followed is that "art can be studied only as art and by means of art."

5. **Public Speaking.** Each junior appears in chapel before the whole student body once during the year with a declamation. Each senior appears in chapel once during the year with an oration written upon a subject of his own choosing. All preparation for chapel work is done under the direction of the professor of oratory, and private rehearsals are given during the week previous to the public appearance. This work is required of *all* students before graduating, regardless of which course they are taking.

### *Philosophy.*

1. **Logic.** Third year, winter term. The art of reasoning correctly is aided by a study of systematic logic, both deductive and inductive. Special prominence is given to methods for exact observation and experiment and correct principles of classification. The previous researches and experience of the students are made to illustrate these principles. Text-book, Creighton.

2. **Psychology.** Fourth year, spring term. A short course in psychology gives the general principles of intellectual and moral philosophy. Sensation, apperception, perception, memory, imagination, thought, feeling and volition are topics of explanation and analysis. Theories of right and wrong and correct principles of action are made the means of a clear understanding of individual responsibility, with special attention to personal rights and duties. Topics are assigned for research, to be presented in thesis form at the close of the term. Text-book, Halleck.

### *Physical Training for Women.*

The maintenance of a vigorous constitution throughout a young woman's college life is of vital importance. Strength and vigor of brain activity depend upon bodily health and strength. Development, both mental and physical, each to attain its purpose, should go hand in hand. That this perfect development may be realized, a gymnasium for women, well equipped with apparatus, baths, lockers, etc., has been provided, and a well-regulated system of physical training is successfully operated.

The Swedish system of educational gymnastics has been adopted for general class work, and medical and corrective exercises are given to such as need them. The object of the work is to promote health, strength and symmetry of body, and also to correct physical defects.

Daily classes are held in light gymnastics—free standing work, marching, fancy steps, drills with bells, clubs, and wands, with musical accompaniment; heavy gymnastics, including chest weights, horse, bars, flying rings, etc.; gymnastic games.

All young women of the College have access to the privileges of the gymnasium, and all below the third year are required to take the work, except such as are found physically unable to engage in it.

Before entering upon the work a physical examination is made by the director of the gymnasium. The examination includes measurements of physical proportions, and takes note of the conditions of the heart and lungs. From this examination an anthropometric chart is platted, showing size, strength, and development, and defects in comparison with the normal standard. At the close of the College year a second examination is made, and measurements taken, and comparison is made to show improvement.

### ***Physics and Electrical Engineering.***

In the following courses instruction is given by text-books, lectures, and laboratory work. Attention will be called to the general applications of the principles learned. In all courses special lines of reading will be encouraged, and investigation and experimentation, so far as the equipment of the department will permit.

In all the general courses it is the purpose of the department to thoroughly ground the students in the fundamental principles of the science. In the technical courses it is the aim to give the student instruction and training along more specialized lines, thus fitting him for his chosen field of work.

Of the studies described, Nos. 1, 5 and 6 are required in the agriculture, domestic science and general science courses; Nos. 1, 2, 3 and 4 in the mechanical engineering course; and all except Nos. 5 and 6 in the electrical engineering course.

1. **Elementary Physics.** First year, spring term. This term's work is intended to give the student a general view of the subject, with such laws and principles as will be useful to them in scientific studies. The importance of accurate observations and conclusions will be impressed. Text-book, Carhart and Chute's Elements of Physics.

2. **Heat.** Second year, spring term. Three hours per week. A thorough study of the principles of heat of importance to the engineer, and an introduction into the elements of thermodynamics. Experimental demonstrations will be given from time to time. Problems and data from experiments performed in class will be frequently assigned to the students. Text-book, Carhart's University Physics.

3. **Electricity and Magnetism.** Fourth year, fall term. A thorough study of magnetism and electricity, with advanced laboratory practice. This course is intended primarily for engineers. Students should have trigonometry and calculus for this course. Library and other reference work will also be required. Text-book, Carhart's University Physics.

4. **Sound and Light.** Fourth year, winter term. Advanced work on sound and light, with laboratory practice. This completes the mechanical engineer's course in physics. Trigonometry is required, and it is recommended that the student take calculus before taking this course. Outside reference work will be assigned. Text-book, Carhart's University Physics.

5. **Mechanics, Sound, and Heat.** Fourth year, fall term. It is recommended that the student have trigonometry. A thorough study of the laws of falling bodies, forces, the principles of work and energy, the laws of sounding bodies, calorimetry, etc., will be made. Problem work is required. Lecture demonstrations will be given, and data taken from which students will make computations. Library and outside reference work are frequently assigned. Text-book, Hastings and Beach's General Physics.

6. **Light, Electricity, and Magnetism.** Fourth year, winter term. This course is a continuation of No. 5. The fundamental laws and phenomena of light, electricity and magnetism will be studied and their practical application noted. Problem work is emphasized. Text book, as in No. 5.

7. **Electrical Measurements.** Fourth year, fall term. This course includes practice on the distribution of magnetism, effects of temperature on magnetism, determination of resistance by various methods, of galvanometer constants, measurements of currents, and electromotive force. Experiments are selected from various laboratory manuals. All engineers are advised to take this course.

8. **Dynamo-electric Machines.** Fourth year, winter term. This course consists of the fundamental theory of such machines, of their various forms, and of the practical design and operation of electrical apparatus and machinery. Text-book, Slingo and Brooker's Electrical Engineering.

9. **Electrical Laboratory.** Fourth year, winter term. Advanced electrical testing—the efficiency of dynamos and motors, characteristics of dynamos, transformers, coefficients of self and mutual induction.

10. **Machine Design.** Fourth year, winter term. Practice in original designing based on previous work.

11. **Applied Electricity.** Fourth year, spring term. Study and practice in the application of electricity to bells, telephones, annunciators, calibrating and testing electrical instruments, applications of graphical methods in testing electrical apparatus, etc.

12. **Electric Power Transmission.** Fourth year, spring term. Lectures on central station design and management, electric traction, and transmission of power.

13. *Elective Courses in Agricultural Physics.* Discussions of the application of physics and physical principles to agricultural problems. Open to students of agriculture. Based on King's Physics of Agriculture.

#### ***Preparatory Department.***

Inasmuch as many students seek admission to the College with inadequate preparation in one or more of the subjects required for entrance, it has been found necessary to establish a preparatory department, in which such deficiencies can be remedied. The work in this department is under the direction of a principal, with whom are associated two assistants and a number of student assistants. Some of the preparatory classes are also conducted by the heads of the College departments. Instruction is given in all studies required for admission to the College. See terms of admission, page 91.

1. **English Grammar.** The aim is to lay a good foundation for the further study of English. Recognizing the fact that grammatical drill develops in students logical habits of thought, besides giving them greater command of language, special attention is given to the analysis and construction of sentences and to the principles of elementary composition. Two classes are formed each term, the B class completing the work in two terms; the A class in one term. Text, state book.

2. **English Composition.** One term, based on Herrick and Damon's Composition and Rhetoric. The text is completed to part IV, special attention being given to the study of usage and diction. In addition to the work of the text, each student is required to write one composition each week, which, after being read before the class, receives corrections from the instructor in charge.

3. **Physiology.** This is elementary work, intended to prepare students for the more advanced work given in second year of the agriculture, domestic science and general science courses. As far as possible, models, skeletons and dissecting material is made use of in the classroom. Martin's Elementary Physiology is used as a text.

4. **Bookkeeping.** This is not an extended course, but sufficient instruction is given to enable the individual to open and close accounts in ordinary business transactions. Text, Stevenson.

5. **Arithmetic.** Instruction is given in the principles that underlie the various classes of problems, thus teaching the student to rely upon himself, not upon rules. Text, state book.

6. **Algebra.** This includes the fundamental operations, least common multiple, greatest common divisor, and simple equations of the first degree containing one unknown quantity, equivalent to 131 pages of the text, Wells's New Higher Algebra.

7. **United States History.** The leading facts, causes and sequences showing the growth of our country and national history are studied with a view to develop true patriotism. Text, state book.

8. **Geography.** Because of recent history, special attention is paid to the geography of the United States, its possessions, products, resources, methods of transportation, etc. Text, state book.

9. *Other Branches of Study.*—Instruction is also given in spelling, reading, and writing.

### **Printing.**

The printing department, in the main building, occupies six large rooms, viz.: Superintendent's office, composing-room, pressroom, folding room or bindery, stock-room, and storeroom, all well lighted, amply ventilated, and heated by steam.

1. **Instruction.** The lessons embraced may be briefly summarized under these suggestive topics: The elements of news, book and job composition and imposition; proof-reading and correcting; plain and color presswork; adaptation of various grades of inks and papers; newspaper and magazine folding; mailing; tableting of stationery, and pamphlet stitching and stapling. The instruction is of that character in which individual advancement is always taken into account, and opportunity is extended for individual growth in the knowledge of those principles which are of practical utility in the every-day work of a printing-office. Occasion for the gaining of experience and acquirement of skill is supplied by the weekly publication of the *Industrialist* and the *Students' Herald*, the execution of the wide range of job printing needed to furnish the various College departments with blanks, lesson outlines, and stationery, and the College societies with programs, notices, etc.; thus furnishing a greater range of work for instruction than is ordinarily found in the average printing-office.

2. **Equipment.** Thirty pairs of cases; large fonts of six-point, eight-point and ten point Roman type and italics; a good assortment of wood and metal job type and brass rule; a Babcock cylinder press and a new Liberty quarto-medium job press, run by electric motor; a Gordon eighth-medium job press; mitering, rule-curving and stapling machines; wire stitcher; paper-cutter, cabinets, stands, imposing stones, etc.



STUDENTS' HERALD STAFF.

***Veterinary Science, Bacteriology, and Physiology.***

1. **Hygiene.** First year, fall term. One lecture a week on personal and public hygiene.

2. **Physiology.** Second year, winter or spring term. Advanced course in human anatomy and physiology; the gross and microscopic structure of the various tissues and organs of the body, and their functions; the various changes, physical and chemical, associated with nutrition, and the conditions that favor the healthy development of the body. This must be preceded by elementary physiology, chemistry I, and elementary physics.

3. **Hygiene of Farm Animals.** Third year, fall term. Breeding and raising of healthy animals; causes of disease and how prevented; disinfection, quarantine, and vaccination; hygienic quarters, food, and methods of feeding; exercise; water; injurious and poisonous foods; parasitic diseases and treatment. Must be preceded by chemistry and advanced physiology.

4. **Comparative Anatomy.** Fourth year, fall term. Comparative anatomy of domestic animals, with special reference to disease, conformation, and unsoundness; general symptoms of disease; common medicines, their action, doses and methods of giving; wounds and their treatment; surgery. Must be preceded by chemistry, advanced physiology, and hygiene of farm animals.

5. **Bacteriology.** General science, third year, spring term; domestic science and agriculture, fourth year and all terms. These courses consist of the morphology, classification and physiology of bacteria; relation of external conditions to bacterial development; disinfectants and disinfecting; bacteriological technique, preparation of culture media, staining, isolating and identifying of bacteria; general fermentation, putrefaction, and decay. In addition, the different courses have the following:

*General Science.*—Bacterial action on foods, nitrification, hygiene of animal infective disease, production of ptomaines, toxins, and other bacterial products.

*Domestic Science.*—Beneficial and injurious bacterial effects on foods; preservation of foods. Hygiene of human infective disease; specific human infectious diseases.

*Agriculture.*—Conditions favoring nitrification and denitrification; hygiene of stock infective diseases; the preparation and use of antitoxins and vaccines.

The students of all courses are required to take laboratory work, in which they study cultural and microscopical features; the staining of bacteria and preparation of culture media; thus the student becomes perfectly familiar with bacteriological apparatus. Must be preceded by advanced physiology and zoology. Lectures and laboratory work.

6. **Veterinary Science.** Fourth year, winter term. Diseases of farm animals, cause, symptoms, and treatment; special attention being given to hygienic nursing and the use of domestic remedies; judging horses as to conformation and soundness. This is intended to meet the practical needs of farmers and stockmen. This must be preceded by physiology, chemistry, hygiene of farm animals, and veterinary anatomy.

Advanced work in human and comparative physiology, bacteriology and veterinary science is offered to students who are qualified. With this advanced work, opportunity for research work, theoretical and practical, will be offered.

## MEANS OF ILLUSTRATION.

In addition to the stock upon the College farm, the veterinary museum contains Azoux models of man and horse which are dissectible; also, apparatus, instruments, charts, models, and an excellent collection of parasites of domestic animals. There is also a large collection of anatomic specimens showing healthy and diseased structures. The bacteriological laboratory is well equipped with microscopes and apparatus for bacteriological work, both elementary and advanced.

## *The Short Courses.*

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There are large numbers of young people who from lack of means or time are unable to take an extended course of study, but whose usefulness in the world would be much increased by a little special training. Their earning capacity in the household or on the farm is far from what it might be, and they are thus handicapped in the struggle for a livelihood. To bring to this large portion of the "industrial classes," even in small measure, the "liberal and practical education" provided for by the organic act, the College has established certain short courses of study, with practice.

The teaching in these courses, while no whit less accurate than in the others, is upon a different plane. Taking students without scientific or mathematical training, the instruction must be more largely a giving of facts, without an elaboration of the underlying principles which the regular courses afford. The work is intensely practical. Studying such texts as any bright young man or woman can understand, receiving lectures of the same type, and putting into daily practice through industrial exercises the facts and principles learned in the classroom, the student cannot but be greatly benefited. It is hoped, too, that in many cases young people who had thought that they could not afford a four-year course will, by this taste of the advantages and pleasures of an education, be led into the regular courses.

These courses are put at the seasons of the year which seem likely to accommodate the most students, those for young men being given in the winter term, when farm work is more slack, and the young women's course being in the fall. Four such courses are now offered: A dairy course of one winter term; a domestic science course of two fall terms; an agriculture-mechanics course and a horticulture-mechanics course of two winter terms. The last two courses are identical the first term, but in the second, one treats horticultural lines more exclusively and the other agricultural.

### REQUIREMENTS FOR ADMISSION.

Persons at least eighteen years of age and of good moral character are admitted to these courses as follows:

Persons between the ages of eighteen and twenty-one will be admitted upon presentation of common-school diploma, grammar-school certificate, teacher's certificate, or high-school diploma, or upon passing an examination in the following subjects: Reading, writing, spelling, arithmetic, grammar, geography, physiology, and United States history. Persons over twenty-one will be admitted without examination, but should have sufficient education to enable them to understand the simple text-books used, and to handle readily problems in common and decimal fractions and percentage. They will be required to attend strictly and constantly to their duties, or leave. They have the same free use of the College library that other students have. Owing to the peculiar nature of the work and to the slight degree of preparation which it assumes, *students are required to be present at the very beginning of the course, and those applying later will not be admitted.*

The short courses are in no sense equivalent to the long courses, and no one should take a short course who can take a whole or even a part of one of the long courses. All of the common-school branches are taught each term; all of the first-year subjects, except elementary botany, which is not taught during the winter term, and nearly all of the second-year studies are taught each term; so that it is possible for one to get nearly all subjects of the first two years by attending during the winter terms only.

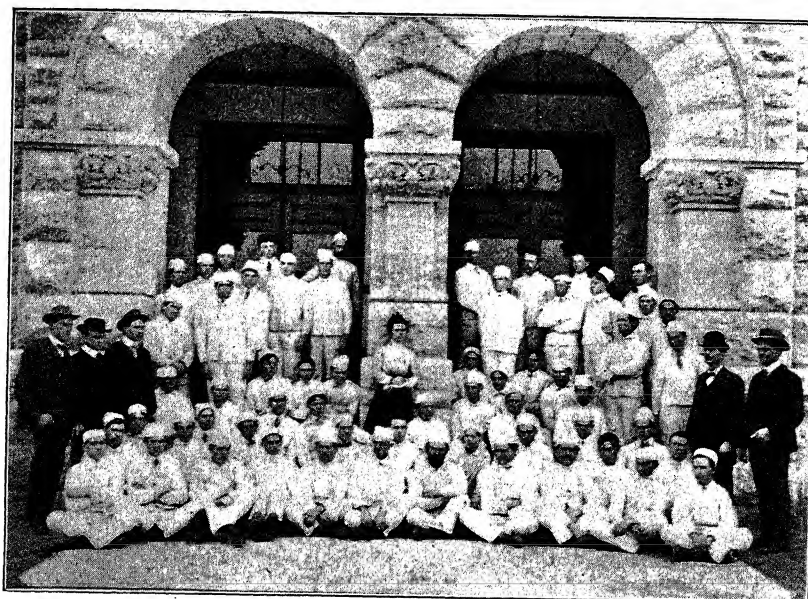
### *Dairy Course.*

One winter term, twelve weeks.

Dairying and Agriculture .....	one-half term	5 hrs. per wk.
Dairy Bookkeeping .....	one-half term	
Creamery Butter-making, or .....	one-half term	5 " "
Cheese-making, or .....		
Private Butter-making .....	one-half term	
Feeds and Feeding .....	one-half term	5 " "
Breeds and Breeding .....	one-half term	
Bacteriology .....		3 " "
Diseases of Dairy Animals .....		2 " "
Boilers and Engines .....		5 " "
For farmers— <i>Milk-testing and Private Butter-making</i> .....		20 " "
For creamery men— <i>Milk-testing and Creamery Butter-making</i> .....		20 " "
For cheese-makers— <i>Milk-testing and Factory Cheese-making</i> .....		20 " "

### OUTLINE OF STUDIES.

**Dairy Bookkeeping.** Practice in bookkeeping that will enable the student to understand the underlying principles, followed by training in keeping books for farm, dairy and creamery accounts.



DAIRY CLASS.

**Dairying and Agriculture.** Milk: its secretion, nature, and composition; causes and conditions influencing the quality and quantity of the milk; handling of milk for the market and for butter-making, including milking, straining, aerating, cooling, preserving, and shipping; creaming of milk by the separator; cream-ripening and butter-making. Production of dairy crops. Text-books, Wing's Milk and its Products, Farrington's and Woll's Testing Milk and its Products.

All students will study dairying together for the first half of the term. This class will then be divided, creamery men taking lectures on *creamery butter-making*, the cheese-makers on *factory cheese-making*, and the dairymen on *private butter-making*.

**Feeds and Feeding.** Properties of common feed stuffs, their effect on character and yield of milk and butter, and their adaptability to Kansas conditions of dairying; the compounding of dairy rations to secure good yields at least cost with products having desired qualities. Careful study of the feeding of the College dairy herd will also be required. Text-book, Henry's Feeds and Feeding.

**Breeds and Breeding.** Characteristics of leading breeds of cattle and their adaptability to Kansas dairy farming; dairy farm, and the selection of dairy animals; care and management of the dairy herd; principles of stock-breeding; scoring and comparative judging of dairy cattle.

**Bacteriology.** Relations of bacteria to methods of keeping milk, ripening cream and cheese, and flavoring butter; diseases of milk, their relations to the health of man and animals; principles of disinfection. Text-book, Russell's Bacteriology. Lectures.

**Diseases of Dairy Cattle.** The common ailments of calves and dairy cows are discussed and their causes and symptoms explained, remedies and preventives suggested, all from a practical farmer's standpoint. During the dairy school the College herd will be tested with tuberculin and the students taught how to make the test.

**Boilers and Engines.** Lectures and practice in the firing of boilers, care and running of engines, pumps, etc.; practice in shops.

**Butter-making and Milk-testing.** Practice in handling milk and its products from the time it leaves the cow until it is marketed as butter, cheese, or sanitary milk. Students may choose either creamery butter-making, cheese-making, or private dairying. Thorough instruction and practice will be given in all three of these lines. The dairy rooms are fully equipped with hand and power separators, Babcock tests, churns and butter-workers, aerators, heaters, sterilizers, milk and cream vats, factory-cheese apparatus, Mann's acid tests, and other needed apparatus. Many manufacturers have volunteered to loan us machinery, so that the dairy students may make tests of the work of the different makes of separators, churns, etc.

#### EXPENSES.

Tuition is free. Board and rooms can be secured for \$2.50 and upward per week; laundry costs about fifty cents per week. Each student will need two white suits and caps for use in the dairy-room. These can be purchased in Manhattan. Unnecessary breakage will be charged at cost. Incidental expenses will be high or low, as the individual determines. The total of all expenses for the entire time, exclusive of railroad fare in coming and returning, need not exceed forty dollars, and with close economy may be made less. Students in the dairy course cannot expect to earn any part of their expenses while at the College, as every hour will be needed for class work, practice, or study.

**Farmers' Short Course.****First Year (Winter Term, Twelve Weeks).**

Feeds and Feeding .....	5 hrs. per wk.
Horticulture, Entomology .....	5 " "
Crop-production, Bookkeeping .....	5 " "
Diseases of Farm Animals, Bacteriology .....	5 " "
Breeds and Breeding .....	5 " "
Blacksmithing, Repairing .....	10 " "
Science Lectures .....	1 " "

**Second Year (Winter Term, Twelve Weeks).**

In the second year the course divides, and the student can take either the course in agriculture or the course in horticulture, as he desires.

AGRICULTURE.		HORTICULTURE.	
	Hrs. per wk.		Hrs. per wk.
Orchard Treatment, Pomology .....	5	Vegetable-gardening and Small-fruit Culture .....	5
Dairying, Farm Architecture .....	5	Orchard Treatment, Pomology .....	5
Botany .....	5	Diseases and Insects .....	5
Physics and Chemistry .....	5	Physics and Chemistry .....	5
Shops, Farm Carpentry, etc. ....	10	Shop, Farm Carpentry, etc. ....	10
Farm Practice .....	5	Horticultural Practice .....	5
Science Lectures .....	1	Science Lectures .....	1

**OUTLINE OF STUDIES.****FIRST YEAR.**

**Feeds and Feeding.** The properties of feed stuffs, and their combination to secure good returns at least cost with products having the desired qualities; effect of food on quality of products; construction of farm buildings and appliances to secure best returns from feed and for saving labor; a study of the feeding on the College farm. Text-book, Henry's Feeds and Feeding. Lecture.

**Horticulture.** General principles underlying plant growth; structure and functions of the various parts of the plants; nutrition, formation of seed, etc.; propagation by seedage, cuttage, graftage, and layerage; environment, including the effects of temperature, light, food and water supply; possibilities of improvement by cultivation, training, and selection. Text-book, Goff's Principles of Plant Culture.

**Breeds and Breeding.** Characteristics of the breeds of live stock and their adaptability to Kansas conditions; principles of breeding; form as an index of qualities; selection and judging of horses, beef and dairy cattle, swine, and poultry.

**Entomology.** Nature, time and extent of the injuries from insect life, and a knowledge of the remedies, when and how to apply them. Structure of a number of insect types; study of the beneficial insects, and the more injurious forms attacking farm, orchard and garden crops. Use of preventives and insecticides.

**Crop-production.** A study of the soil, the plant, and crop-growing, including the management of the soil for maintaining and increasing its productivity, the improvement of worn-out soils, conservation of moisture and the preparation of the soil, selection of the seed, method of planting, treatment after planting and harvesting of Kansas field crops to secure best returns at least cost. Text-book, Bailey's Principles of Agriculture. Lectures.

**Bookkeeping.** The principles are mastered through their practical application to forms adapted to farm affairs. Each student keeps a regular set of books, in which accuracy and neatness are not less important than a correct understanding of principles. A set of books is developed which would be practical for every



JUDGING SWINE.



JUDGING CHICKENS.

farmer, accounts being kept with various departments of his business—fields, granaries, garnerers, orchards, hogs, cattle, milch cows, etc.

**Diseases of Farm Animals.** The common ailments of farm animals are discussed, their causes and symptoms explained, and preventives and remedies suggested. Inoculation against blackleg will be performed by the student in this course.

**Bacteriology.** Characteristics of bacteria; their relation to health and disease of man and animals, to soil fertility, and to quality of dairy products; principles and methods of disinfection.

**Blacksmithing.** Forging and welding, construction of singletree clips, wagon ironing, clevises, horseshoes, sharpening and tempering plows and tools, general repair work. Advanced work is also offered in the care and management of boilers and engines. If the student desires, he can make a forge and set of blacksmith tools to take home with him, paying only for the iron used.

**Science Lectures.** Lectures will be given in both the first and second years of the course by the instructors on subjects of most interest to the students in this course.

#### SECOND YEAR—AGRICULTURE COURSE.

**Dairying.** Milk: its secretion, nature, and composition; causes and conditions influencing the quality and quantity of milk; handling of milk for the market and for butter-making, including milking, straining, aerating, cooling, preserving, and shipping; creaming of milk by gravity methods and by the separator; cream ripening and churning; washing, salting, working, packing and marketing butter. Text-book, Wing's Milk and its Products.

**Farm Architecture.** Each student will be required to prepare plans, elevations, sections, detailed drawings and specifications of a sanitary farm barn, with outbuildings.

**Orchard Treatment and Pomology.** Same as in horticulture course.

**Botany.** The laws of plant growth which have a direct bearing upon the raising of grasses, grains, clovers, forage-plants, and weeds; a study of the common fungi that affect cultivated plants; seed-testing; practical methods of farm seed-breeding.

**Physics.** A consideration of the principles of physics which underlie farm operations, farm mechanics, control of soil moisture, physical laws of tillage, meteorology. A knowledge of the law of physics enables the farmer to store moisture and to reduce loss of water from the soil by evaporation. It is the practical application of these laws that will solve our drought problem.

**Chemistry.** The relation of soils to earth, air, and water, formation and characteristics of different kinds of soils, soil enrichment and improvement, the chemistry of feeds and of animal products.

**Farm Carpentry.** Elementary woodwork in joinery and construction, followed by general woodwork and carpentry, care and use of farm machinery, the building of frame structures, such as stables, piggeries, poultry-houses, ice-houses, and farm creameries, will be given both by lectures and by practical work.

#### SECOND YEAR—HORTICULTURE COURSE.

**Vegetable-gardening and Small-fruit Culture.** The first half of the term is devoted to vegetable-growing, consideration being given to the raising of vegetables for home and market; locations, soils, fertilizers, tools, irrigation, etc., best suited for crops grown in kitchen- and market-gardens; the growing of extra-early or late crops, their special treatment, cultivation, and harvesting; the means

employed in the preservation of vegetables for future use; vegetables suited to Kansas conditions, methods of improvement, etc. Small-fruit culture occupies the second half of the term. The subject is treated in much the same manner as vegetable-gardening, taking up the cultivation of small fruits and the methods employed in their propagation, handling, and improvement. Five hours per week. Lectures.

**Orchard Treatment and Pomology.** This branch is devoted to the practical treatment of orchard work; location, soil, planting, pruning, cultivation and fertility of the orchard; a study of the use and value of windbreaks—how best made, trees suitable for same in Kansas; causes of plant variation and methods employed in the improvement of orchard fruits; grape growing in the West, a study of the distinctive characteristics of varieties, their value for home and market use; lists of varieties of fruit suitable for Kansas orchards; a general treatment of planning the grounds, location of houses, barns, gardens, orchards, lawns, fields, etc. Five hours per week. Text-book, Bailey's Principles of Fruit-growing. Lectures, with library references.

**Orchard Diseases and Insects.** The work of this branch is the investigation of various orchard pests. Life-history and depredations of insects and fungous diseases attacking horticultural crops, together with means of combatting them, preventives, and remedies; mechanical devices, spraying compounds and machinery, and methods employed in the warfare.

**Chemistry and Physics.** In classes with the agriculture course.

### **Domestic Science Course.**

#### **First Year (Fall Term, Twelve Weeks).**

	<i>Hrs. per wk.</i>
Lectures and Practice in Cooking .....	15
Home Sanitation and Household Accounts .....	1
Sewing.....	16
Drawing .....	5
Vegetable-gardening and Floriculture.....	5

#### **Second Year (Fall Term, Twelve Weeks).**

	<i>Hrs. per wk.</i>
Lectures and Practice in Cooking and Home Nursing .....	10
Bacteriology and Physiology .....	5
Physics one-half term, }	5
Chemistry one-half term, }	
Dressmaking .....	12

#### **FIRST YEAR, FALL TERM, TWELVE WEEKS.**

**Lectures and Practice in Cooking.** This work includes the following topics: The origin and purpose of cooking, and the effects of heat and cold upon starch and albumen; direct application of the principles learned to the cookery of eggs, vegetables, beverages, and soups; the general cookery of meats, with study of the meat charts; baking-powders, their composition and adulteration; yeast, and bread-making by fermentation.

**Drawing.** The work in drawing is especially adapted to the needs of this class of students; it will consist of free-hand and geometrical drawing.

**Home Sanitation and Household Accounts.** Care of the kitchen, living-rooms, sleeping-rooms, dining-rooms, etc., including the cleaning of kitchen utensils and lamps, sweeping, dusting, and care of plumbing. A simple method of keeping accounts of receipts and expenditures will be given.

**Sewing.** Pupil makes a model book covering the full course in hand sewing, and consisting of basting, gathering, darning, patching, etc. Machine practice, drafting, cutting and making underskirt and drawers; drafting, fitting and mak-

ing dress without lining; cutting and making corset cover and night-dress. Materials for the model work will be furnished by the College. Each pupil will furnish her own material for the garments, but if sufficient proficiency is shown in making the first garment, pupils may be allowed to take orders for the others.

**Vegetable-gardening and Floriculture.** The first half of the term is devoted to vegetable-growing. Subjects treated include the raising of vegetables for home and for market, with location, soils, manures, tools, irrigation, etc., best suited for crops grown in kitchen- and market-gardens; the construction and manipulation of hotbeds, cold-frames, and winter gardens; the growing of early and late crops, their special treatment, methods of cultivation, planting, transplanting, harvesting, and marketing; a study of varieties suitable to local conditions; and the origin, nature and methods of improvement of vegetables. The last half of the term is devoted to floriculture. Lectures in the classroom are supplemented by practical exercises in the greenhouses and gardens, treating of the propagation and culture of flowers, including the treatment of seeds, cuttings, mixings of soils, potting, repotting, watering, cut flowers, packing, and the many operations that attend amateur and commercial flower-gardening.

SECOND YEAR, FALL TERM, TWELVE WEEKS.

**Lectures and Practice in Cooking and Home Nursing.** The following subjects are taken up: The food principles and their classification; the uses of food in the body; canning and preserving; cookery of the various combinations made with eggs, thus involving the application of heat to albumen; simple chemistry of bread-making, rolls, puddings, etc.; practical lessons in frying and in cookery of salads, plain pastry, dessert, and cake; a series of six lessons in invalid cookery, including gruels, toast, beef tea, soups, eggs, and milk; and six lessons in home nursing.

**Physics.** The subjects of mechanics, sound, heat, light and electricity will be briefly treated by lectures, especial attention being given to heat in its relation to cooking, ventilation, etc.

**Chemistry.** By means of lectures, accompanying a simple text-book, the attempt is made to give the students some idea of the nature of chemical action, and to impart the facts most directly bearing upon cleaning, sanitation, cooking, and nutrition.

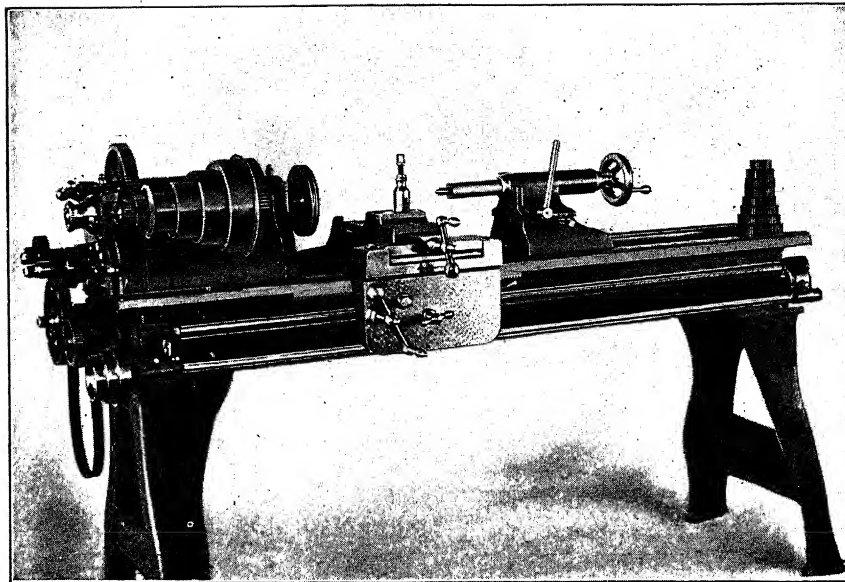
**Bacteriology.** Brief history of bacteriology. External conditions that affect bacteria. Disinfection; how to prevent spread of infectious diseases.

**Physiology.** Physiology and hygiene of the human body; laws of health and care of the sick.

**Dressmaking.** Pupil will be taught the use of a dress-cutting system, cutting, fitting and making woolen dress. Pupil must furnish her own material, and cut and make a dress for herself.



SHOPS.



LATHE BUILT BY STUDENTS.

## *Apprentice Courses.*

### *Mechanical Department.*

Many who are unable to take the four-year engineering course and who wish to learn a trade will find in the apprentice courses opportunities to obtain practical skill in carpentry, blacksmithing, foundry, machine-shop practice, and boiler and engine attendance.

In the apprentice courses the advantages of the shops are offered free to a limited number of young men who cannot enter regularly in the College classes. Since instruction rather than money-making is the object of these courses, it can be readily seen that the apprentice work under skilled instructors offers many advantages over the ordinary trade apprenticeship. The number that can be accommodated for the coming year is estimated at thirty, and the work given is of the most practical character.

### REQUIREMENTS FOR ADMISSION.

Persons at least eighteen years of age and of good moral character are admitted, as follows:

Persons between the ages of eighteen and twenty-one will be admitted upon presentation of common-school diploma, grammar-school certificate, teacher's certificate, or high-school diploma, or upon passing an examination in the following subjects: Reading, writing, spelling, arithmetic, grammar, physiology, and United States history. Persons over twenty-one will be admitted without examination. Their taking one of the regular four-year courses must be obviously impracticable; must observe College regulations; must agree to work at least thirty hours per week in the shops, and must remain in the shops for a minimum period of eighty weeks. No charge of any kind is made, nor is any pay given to apprentices. All apprentices are taken on one month's trial, that those not naturally suited for such work may be relieved of the necessity of remaining the full period. Graduates of these courses are given a certificate showing proficiency in line of work pursued.

Courses are offered in the following lines:

- |                            |                                    |
|----------------------------|------------------------------------|
| <i>a.</i> Machine-shop.    | <i>d.</i> Foundry.                 |
| <i>b.</i> Blacksmith shop. | <i>e.</i> Boiler- and engine-room. |
| <i>c.</i> Carpenter shop.  |                                    |

### PRINTING DEPARTMENT.

Persons may enter the printing department under the same requirements as above. The work consists of composition, proof-reading, press and job work.

### *Young Men's Christian Association.*

The Young Men's Christian Association, having a membership of over 400, is one of the largest and most influential student organizations of the College. The association is thoroughly organized for practical Christian work, and exerts a most wholesome influence in the College.

When a young man gets off the train at Manhattan he finds a committee from the Young Men's Christian Association ready to help him find a desirable boarding place, and to assist him, in every way possible, to make his college life both pleasant and profitable.

The nature of the work of the association may be briefly indicated by the following quotation from the back of a membership application blank:

#### *Reasons for Joining the Y. M. C. A.*

##### I.—BECAUSE OF WHAT IT STANDS FOR:

Clean Christian manhood in the College.  
Growth into a larger and more spiritual Christian life.  
"Practical Christianity"—rendering material assistance in every way possible.  
Aggressive Christian work by and for students.

##### II.—BECAUSE OF WHAT IT OFFERS YOU, AND ALL OTHER YOUNG MEN OF THE COLLEGE:

Attractive and profitable religious meetings.  
The use of a homelike parlor, together with an organ, where you may go evenings and Sunday afternoons when you feel lonely and cannot study.  
A sick-room, where you will be placed and taken care of when you need such attention.  
Opportunities of fellowship and frequent social gatherings.  
Two courses in Bible study.  
Classes in the study of modern missions.  
The opportunity of doing Christian work among your fellows.  
Free tutoring when needed and deserved.  
Free employment and general information bureau.  
Students' loan fund, for helping worthy students out of tight places.  
A loan library of text-books.  
The most valuable and helpful handbook in the West.  
A membership ticket which will secure for you special courtesies and privileges in all the leading city, railroad and college associations on the continent.  
The brotherly sympathy and advice of the General Secretary in regard to any difficulty that you may have.

##### III.—BECAUSE OF WHAT IT IS:

The largest student organization in the College.  
The largest intercollegiate organization in existence.  
An organization heartily supported by the Faculty.  
An organization in good financial condition.  
An organization that keeps out of College politics.  
An organization that has in its membership the most prominent men in College, and men from all classes of students.

All young men contemplating entering college are invited to write to the General Secretary of the association for all kinds of information regarding the College, and especially in regard to the work of the Y. M. C. A.

### *Young Women's Christian Association.*

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The Young Women's Christian Association of the Kansas State Agricultural College was organized in 1886, and in 1901-'02 had a membership of 100, made up of women of the faculty, assistants, and young women of the various classes.

The object of the association is to look after the general welfare of the women who attend the institution and to give them any assistance needed. The work of the association begins by meeting the new women at the train and helping them secure the best and most homelike boarding places at reasonable rates. Guides are supplied to show the new students to their respective classrooms until familiar with the buildings. The employment bureau helps those who need it to find work. The new-student committee assists in every way possible to get the new students properly started with their college work.

To the young women away from home for the first time questions arise which the older and more experienced student will be able to solve, and help in solving these problems is cheerfully given. The idea of each association member is to make each new student feel at home in the College and association rooms, and feel that when she meets a Y. W. C. A. student she meets a friend who is interested in her welfare.

The association looks after women in case of sickness, and, where the sickness is severe, nurses are detailed from the members to look after the patient as long as a nurse's services are required.

Each Saturday at the noon hour devotional meetings are held, conducted by instructors of the College or members of the association. Socials are held each term, to enable the young women of the College to become better acquainted.

In the Domestic Science Hall is the office of the general secretary and the general headquarters of the association. This office and reading-room is supplied with papers and magazines, and here any woman may spend a vacant hour with a short story or a scientific article, being assured she is a welcome visitor.

Each year the officers of the association receive letters from parents or friends of prospective students, asking that care in certain lines be given. These cases always receive special care.

Any young woman who contemplates attending the Kansas State Agricultural College, and who wishes information such as the catalogue does not give, may write to the General Secretary, Y. W. C. A., Manhattan, Kan.

## *General Information.*

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### *Terms of Admission.*

Persons over fourteen years of age will be admitted in any of the following ways:

1. Kansas teacher's certificate, provided no subject is below seventy per cent.
2. Diploma received on completion of a county course of study which has been approved by the Faculty.
3. Certificate of passing the grammar grade or diploma from the high school of any city or county with a course of study approved by the Faculty.
4. Pass a satisfactory examination in reading, spelling, writing, geography, arithmetic, United States history, English grammar, and physiology.

Persons over eighteen years of age will be admitted to the preparatory classes if unable to pass the common-school branches.

Full admission to the first year, in addition to the common-school branches—reading, spelling, writing, geography, arithmetic, United States history, English grammar, and physiology—requires book-keeping, English composition, and algebra through simple equations of one unknown quantity. It is quite possible for a good student who enters somewhat behind to make up his deficiency in a year or two and graduate in four years.

All of the preparatory studies are taught each term; and all of the first-year studies except botany, which is not taught during the winter term, and nearly all of the second-year subjects are taught each term; so that a person may enter at the beginning of any term and find work suited to his advancement.

Examinations for admission are held at the beginning of each term. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

On entrance, applications for advanced standing in the courses or for credit for certain studies in the courses may be made to the chairman of the committee on examinations. After entrance, such applications should be made to the professor in charge of the study. In any case the applicant will be required to pass such an examination as the professor in charge deems necessary.

The courses of the following cities and counties have been approved by the Faculty, and others may be submitted at any time :

## CITIES.

Abilene.	Coffeyville.	Hiawatha.	Lyons.	Pratt.
Alma.	Columbus.	Holton.	Manhattan.	Russell.
Anthony.	Coscordia.	Horton.	Mankato.	Salina.
Argentine.	Council Grove.	Humboldt.	Marion.	Scranton.
Arkansas City.	Dexter.	Hutchinson.	McPherson.	Sedan.
Atchison.	Dodge City.	Independence.	Minneapolis.	Seneca.
Augusta.	El Dorado.	Iola.	Neodesha.	Solomon City.
Baldwin.	Ellsworth.	Junction City.	Newton.	St. Mary's.
Belleville.	Emporia.	Kanopolis.	Olathe.	Topeka.
Beloit.	Eureka.	Kansas City.	Osage City.	Valley Falls.
Burlingame.	Fort Scott.	Kingman.	Osborne.	Wamego.
Burlington.	Fredonia.	La Cygne.	Oswego.	Washington.
Caldwell.	Garden City.	Larned.	Ottawa.	Waverly.
Chanute.	Garnett.	Lawrence.	Paola.	Wellington.
Cherryvale.	Gaylord.	Leavenworth.	Parsons.	Wellsville.
Chetopa.	Girard.	Lebo.	Pittsburg.	Winfield.
Clay Center.	Great Bend.	Lincoln.	Pomona.	Wichita.
Clifton.				

## COUNTIES.

Allen.	Elk.	Kingman.	Phillips.	Shawnee.
Barber.	Ellis.	Labette.	Pottawatomie.	Sherman.
Bourbon.	Ellsworth.	Lane.	Pratt.	Smith.
Chautauqua.	Franklin.	Lincoln.	Reno.	Thomas.
Cheyenne.	Geary.	Logan.	Republic.	Trego.
Clay.	Gove.	Marion.	Rice.	Wabaunsee.
Cloud.	Greeley.	Miami.	Riley.	Wallace.
Coffey.	Harper.	Mitchell.	Rooks.	Washington.
Comanche.	Harvey.	Morris.	Rush.	Wilson.
Cowley.	Jefferson.	Nemaha.	Russell.	Woodson.
Decatur.	Jewell.	Norton.	Scott.	Wyandotte.
Douglas.	Johnson.	Ottawa.		

## COUNTY HIGH SCHOOLS.

Atchison and Dickinson.

Counties and cities on the accredited list may be called upon at any time to furnish evidence that they are maintaining a satisfactory standard of scholarship.

Students should make every effort to enter on the first day of the term. Those entering later will be at a serious disadvantage, and if more than two or three weeks late should expect to take review work or fewer studies. If unable to enter before mid-term it will be better to wait until the next term.

*Hospitants.*

That mature persons not able to attend College continuously may nevertheless be able to enjoy, in a measure, the privileges of the institution, an invitation has been extended to all citizens of Kansas who may be so disposed to visit the College, its lectures, laboratories, library, shops, and various departments, and to avail themselves, as fully of its advantages as may be consistent with their wishes, with the needs and duties of the regular students, and with the harmonious and successful working of the institution. Following are certain rules concerning hospitants:

Persons regularly attending any of the classes of the Kansas State

Agricultural College, without assuming the regular duties of students, will be known as hospitants, and—

1. Must be persons of mature age, whose attendance on regular College duties is obviously impracticable.
2. Must be properly enrolled at the President's office.
3. May attend any of the regular classes of the institution, subject to the same regulations, with regard to punctuality and attendance, as are imposed upon regular students, except as to recitations and examinations.
4. May use the library, as regular students.
5. Are not entitled to laboratory privileges without special recommendation of the professor in charge and the permission of the Faculty.

#### *Examinations.*

Examinations for admission are held at the beginning of each term, as shown in the calendar of the college year. Applicants at other times during the school year have special examinations. These examinations are chiefly written, and a grade of seventy per cent., at least, must be obtained to pass a study.

Examinations in the courses are held twice each term, as announced in the calendar. The results of the examinations, marked on a scale of 100, are combined with the grades of the preceding daily exercises into a grade for the period. Grades reported to the Secretary for record are made up by giving the mid-term record a value of one-third and the record for the last half of the term a value of two-thirds. For passing a study, the mean grade so calculated, and also the grade for the last half of the term, must be at least seventy. Any student receiving less than a passing grade on two or more studies may be required to drop back or withdraw from the College. Any student may receive a certificate of standing, upon leaving College at the close of a term.

Students deficient in entrance studies must make good such deficiencies before entering on the work of the second year. Students are not catalogued in the third-year class unless all deficiencies of the preceding years are provided for. Candidates for graduation must make good all deficiencies before entering on the work of the spring term of the fourth year. No student is considered as a candidate for graduation who, after the opening of the fall term, is deficient more than three full studies in addition to regular work. Extra work is not allowed to any student who failed in any branch the preceding term, or whose average grade for all branches was less than eighty.

After entering college, students are allowed special examinations only upon recommendation of the professor in charge, and by permission of the committee on assignments. Permission for examina-

tion in studies not pursued with a class must be obtained at least two months before the examination is held. All such examinations are held under the immediate supervision of the professor in charge, and are thorough and exhaustive. Students desiring credit for work done elsewhere must bring certificates and catalogues to show that the work done is equivalent to ours. The right is reserved to cancel any credits if the work of the student in succeeding branches shows insufficient preparation.

#### ***Regulations in Regard to Substitutions.***

With the five regular courses that the College now offers, most of the requirements of students are met. For one reason or another, however, some students find it necessary or desirable to substitute something else for the work that their respective courses would require. To place such substitutions on a systematic basis, the following regulations have been adopted by the Faculty:

1. Substitutions shall, as far as practicable, give training similar to that of the work displaced.
2. No student shall be allowed a substitution for work in which he has failed.
3. Unless made necessary by the acts of the Board of Regents or of the Faculty, substitutions shall not be allowed: (a) To students who are below the third year; (b) to students who have failed in any study of the two terms' work immediately preceding; (c) unless arranged for in advance.
4. Students desiring to substitute other work for any requirement in their respective courses of study must present written requests to the committee on assignments.
5. When a request for substitution is made by any student, the committee on assignments shall consult with all of the professors whose work is touched by the proposed substitution, and if unable to agree with them the case shall be submitted to the Faculty.
6. All substitutions arranged by the committee on assignments shall be reported to the Faculty by posting on the Faculty bulletin-board, and if not objected to within one week shall be reported to the Secretary for record in the students' register.

#### ***General Duties and Privileges.***

General good conduct, such as becomes men and women anywhere, is expected of all. Every student is encouraged in the formation of sound character by both precept and example, and expected, "upon honor," to maintain a good repute. Failure to do so is met with prompt dismissal. No other rules of personal conduct are announced.

Classes are in session every week-day except Monday, and no stu-

dent may be absent without excuse. Students cannot honorably leave the College before the close of a term, unless excused beforehand. A full and permanent record of attendance and scholarship shows to each student his standing in the College.

Chapel exercises occupy fifteen minutes before the meeting of classes each morning, and absence from them is noted.

Nearly every Saturday, at 1:30 P. M., the whole body of students gathers for a public lecture, or for rhetorical exercises of the third- and fourth-year classes.

There are five prosperous literary societies, which meet weekly in rooms set apart for their use. The Alpha Beta and Franklin open to both sexes, and the Ionian for young women, meet Saturday afternoon. The Webster and the Hamilton admit to membership young men only, and meet on Saturday evening.

At various times during the year the College halls are opened for social or literary entertainments for the whole body of students, or for classes. For the last five years the students have organized and presented courses of entertainments, which have been of high value, and of a moderate expense to each individual.

### *Earning One's Way.*

The courses of study are based upon the supposition that the student is here for study, and a proper grasp of the subjects cannot be obtained by the average student unless the greater part of his time is given to college duties. Students in straitened circumstances are encouraged and aided in every way possible, but unless exceptionally strong, both mentally and physically, are advised to take lighter work by extending the course, if obliged to give any considerable time to self-support. As a rule, students should be prepared with means for at least a term, as some time is necessary for one to make acquaintances and learn where work adapted to him may be had.

The lines in which employment may be had are various. The College itself employs student labor to the extent of about \$1000 per month, the rate paid being ten cents per hour. This work is on the farm, in the orchards and gardens, in the shops and printing-office, for the janitor, etc. As one's ability and trustworthiness become established, more responsible and more remunerative work may be had, to a limited extent. Many students obtain employment in the town; some work for their board in families in town or in the country near the College. Labor is everywhere respected, and the student who earns his way is honored by all. He will necessarily have little time for the lighter pleasures that may be incident to college life.

### *Expenses.*

Tuition is free to all, irrespective of residence in Kansas; and no fee for incidental or contingent expenses is charged. Board and washing are not furnished by the College. Board, with furnished room, can be procured in private families at from \$2.50 to \$3.50 per week, or table board in student clubs from \$1.50 to \$2.25 per week. Furnished rooms, without board, can be obtained at from \$3.50 to \$5 per month. Some students board themselves at even less cost, and rooms for the purpose can be obtained at a rent of from \$1 to \$3.50 a month. Washing costs from 50 cents to \$1 a dozen pieces. Ordinary expenditures, aside from clothing and traveling expenses, range from \$100 to \$200 a year. No institution in the state furnishes an education at less cost to the student.

### *Business Directions.*

General information concerning the College and its work, studies, examinations, grades, boarding places, etc., may be obtained from the President or the Secretary.

Questions, scientific or practical, concerning the different departments of study or work, may be addressed to the several professors and superintendents.

Loans upon school-district bonds are to be obtained from the Loan Commissioner.

Bills against the College should be presented monthly, and, when audited, are paid from the office of the Treasurer.

All payment of principal and interest on account of bonds or land contracts must be made to the state treasurer, at Topeka. Applications for extension of time on land contracts should be sent to the Secretary of the Board of Regents, at Manhattan.

The *Industrialist* may be addressed through Pres. E. R. Nichols, managing editor.

Donations for the library should be sent to the Librarian; donations for the museum, to the curator of the museum.

Applications for farmers' institutes should be made as early in the season as possible, addressing Institute Department, Kansas State Agricultural College.

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Guy Emerson Souders,	Manhattan, Riley.
Merlin Selden Spencer,	Chetopa, Labette.
Arthur S. Stauffer,	Newton, Harvey.
Harry L. Stevens,	Green, Clay.
Effie L. Stewart,	Humboldt, Allen.
Halcey Benjamin Stickney,	Stickney, Barton.
Mary Catherine Strite,	Ogden, Riley.
K. Elizabeth Sweet,	Burlington, Coffey.
Charles Bartholow Swift,	Williamsburg, Franklin.
Joseph Earl Tanner,	Laclede, Pottawatomie.
Howard Taylor,	Chapman, Dickinson.
William G. Tellin,	Newton, Harvey.
Wendell Phillips Terrell,	Fort Worth, <i>Texas</i> .
Carl Thompson,	Garrison, Pottawatomie.
John Bert Thompson,	Leon, Butler.
Ray Harmon Thompson,	Osborne, Osborne.
Roger S. Thompson,	Osborne, Osborne.
Claude B. Thummel,	Axtell, Marshall.
Norman Lee Town,	Valencia, Shawnee.
Hezekiah Tracy,	New Lancaster, Miami.
Frieda Trunk,	Lyons, Rice.
Marcia Elizabeth Turner,	Rock Creek, Jefferson.
Harry Umberger,	Hymer, Chase.
Gertrude M. Vance,	Manhattan, Riley.
Fred Van Dorp,	Topeka, Shawnee.
Eleanor Belle Van Orsdel,	Riley, Riley.
Laura Bell Ware,	Manhattan, Riley.
Nettie J. Wayland,	Kansas City, Wyandotte.
Frank Cooper Webb,	Clearwater, Sedgwick.
William Allen Webb,	Clearwater, Sedgwick.
Margaret Welter,	Myers Valley, Pottawatomie.
Mary C. West,	Spring Hill, Johnson.
Joe M. Wharton,	Yates Center, Woodson.
Clarence Earl Whipple,	Olivet, Osage.
James Halley Whipple,	Olivet, Osage.
Orville Blaine Whipple,	Olivet, Osage.
Wayne White,	Burlington, Coffey.
George Everett Whitney,	Manhattan, Riley.
Amelia Jennie Wiest,	Manhattan, Riley.

Name.	Post-office and county (or state).
Florence Elaine Wilber, . . . . .	Belleville, Republic.
D. Clifford Wilcox, . . . . .	Ottawa, Franklin.
Rose Wilkinson, . . . . .	Manhattan, Riley.
William J. Wilkinson, . . . . .	Manhattan, Riley.
Fannie R. Williams, . . . . .	Manhattan, Riley.
George Leroy Williston, . . . . .	Manhattan, Riley.
Frederick W. Wilson, . . . . .	Hill City, Graham.
George Heber Wilson, . . . . .	Winfield, Cowley.
John T. Wilson, . . . . .	Fairview, Brown.
Martha Ellen Wilson, . . . . .	Kellogg, Cowley.
Robert S. Wilson, . . . . .	Eatonville, Cowley.
Katherine J. Witt, . . . . .	Hartshorne, <i>Ind. Territory.</i>
George Wolf, . . . . .	Garden City, Finney.
Harold Bert Wolfe, . . . . .	Kensington, Smith.
Frank Woodruff, . . . . .	Yates Center, Woodson.
Earnest A. Wright, . . . . .	Smith Center, Smith.
Emily Elizabeth Yarroll, . . . . .	Leavenworth, Leavenworth.

## FRESHMEN.

Charles Goodrich Abele, . . . . .	Holton, Jackson.
Harvey Adams, . . . . .	Ozawkie, Jefferson.
Elva Veola Akin, . . . . .	Zeandale, Riley.
Pearle Akin, . . . . .	Manhattan, Riley.
Charles Wesley Allison, . . . . .	Fort Scott, Bourbon.
Harold H. Amos, . . . . .	Manhattan, Riley.
George Leslie Ashton, . . . . .	Keats, Riley.
Earl Axtell, . . . . .	Fort Worth, <i>Texas.</i>
Mabel Adelia Baird, . . . . .	Arkansas City, Cowley.
Nellie Wilhelmina Baird, . . . . .	Marquette, McPherson.
Walter Raymond Ballard, . . . . .	Baxter Springs, Cherokee.
Frank Everett Balmer, . . . . .	Woodston, Rocks.
Walter Ray Barr, . . . . .	Manhattan, Riley.
Earle Maynard Baxter, . . . . .	Manhattan, Riley.
Mabel Baxter, . . . . .	Manhattan, Riley.
William Fielding Bayne, . . . . .	Tisdale, Cowley.
Ira J. Beach, . . . . .	Winfield, Cowley.
Harry N. Bealey, . . . . .	Morrill, Brown.
Andrew J. Bell, . . . . .	Beverly, Lincoln.
Kate Bell, . . . . .	Manhattan, Riley.
Will Benham, . . . . .	Beloit, Mitchell.
Lyell A. Bentley, . . . . .	Wallace, Wallace.
Walter Herman Berkey, . . . . .	Louisburg, Miami.
Evelyne Myrtle Berkley, . . . . .	Manhattan, Riley.
Arthur N. Berquist, . . . . .	Lindsborg, McPherson.
Ora Pearl Betz, . . . . .	Chapman, Dickinson.
Worthy Val Jean Biddison, . . . . .	Manhattan, Riley.
Louis Ray Bigge, . . . . .	Stockton, Rocks.
Frank Milton Billick, . . . . .	Newton, Harvey.
Ida E. Birch, . . . . .	Manhattan, Riley.
Ethel Bisbey, . . . . .	Pavilion, Wabaunsee.
Bessie Louisa Blanchard, . . . . .	Marysville, Marshall.

Name.	Post-office and county (or state).
George L. Bliss, . . . . .	Ottawa, Franklin.
Campbell Ward Blue, . . . . .	Springfield, <i>West Virginia</i> .
Mary Bolton, . . . . .	Paxico, Wabaunsee.
Holmes Bottenberg, . . . . .	Netawaka, Jackson.
Helen Elizabeth Bottomly, . . . . .	Manhattan, Riley.
Herbert Jefferson Bottomly, . . . . .	Manhattan, Riley.
Gordon B. Bourne, . . . . .	Delphos, (Cloud).
William Branstine, . . . . .	Long Island, Phillips.
Edward Brant, . . . . .	Wichita, Sedgwick.
Jesse E. Breckbill, . . . . .	Moonlight, Dickinson.
Flora Edna Brenner, . . . . .	Manhattan, Riley.
George K. Brenner, . . . . .	Manhattan, Riley.
Benjamin Franklin Britton, . . . . .	Fort Worth, <i>Texas</i> .
Alexander Dashway Brown, . . . . .	Manhattan, Riley.
Edwin H. Brown, . . . . .	Leavenworth, Leavenworth.
Frank E. Brown, . . . . .	Highland, Doniphan.
G. Homer Brown, . . . . .	Arkansas City, Cowley.
George W. Brown, . . . . .	Highland, Doniphan.
William Wilkinson Buckley, . . . . .	Clyde, Cloud.
Albert Cooper Buffum, . . . . .	Manhattan, Riley.
Blenda Genevieve Burkman, . . . . .	Talmo, Republic.
Harvey A. Burt, . . . . .	Bronson, Bourbon.
Walter E. Burt, . . . . .	Bronson, Bourbon.
William Archie Bush, . . . . .	Oakland, Shawnee.
W. Wesley Bush, . . . . .	Little River, Rice.
Arthur Butler, . . . . .	Lawrence, Douglas.
Horace Butler, . . . . .	Lyons, Rice.
Fred Gordon Campbell, . . . . .	Hutchinson, Reno.
Kate Levenia Campbell, . . . . .	Manhattan, Riley.
Richard Campbell, . . . . .	Hutchinson, Reno.
Will Ward Campbell, . . . . .	Emporia, Lyon.
Samuel Mordecai Carnahan, . . . . .	Stockdale, Riley.
James Edward Carter, . . . . .	Oskaloosa, Jefferson.
Robert Archer Cassell, . . . . .	Manhattan, Riley.
Robert Merritt Chamberlain, . . . . .	Stockton, Rooks.
Arthur Allen Chubb, . . . . .	Hoyt, Jackson.
Frederick Maxwell Clark, . . . . .	Manhattan, Riley.
Norman H. Clark, . . . . .	Welcome, Geary.
Clyde L. Clarke, . . . . .	Hoyt, Jackson.
Lida Ethel Clemons, . . . . .	Manhattan, Riley.
Earle Albert Cole, . . . . .	Cuba, Republic.
Mary Margaret Cole, . . . . .	Manhattan, Riley.
Orlo Loomis Coleman, . . . . .	Oneida, Nemaha.
Roy Venoia Coleman, . . . . .	Oneida, Nemaha.
Roy Allison Collier, . . . . .	Liberal, Seward.
Mary P. Colliver, . . . . .	Galva, McPherson.
Archie Conner, . . . . .	Lyons, Rice.
Edna L. Converse, . . . . .	Rhinehart, Dickinson.
George Wallace Cook, . . . . .	Ottawa, Franklin.
W. Howard Cook, . . . . .	Kingman, Kingman.
Benjamin Bonham Cooksey, . . . . .	Emmons, Washington.

Name.	Post-office and county (or state).
Ralph Cooley, . . . . .	Manhattan, Riley.
Ruth Cooley, . . . . .	Manhattan, Riley.
Don Carl Corbin, . . . . .	Owens, <i>Oklahoma</i> .
Forrest Leslie Courter, . . . . .	Downs, Osborne.
Arthur M. Cowan, . . . . .	Athol, Smith.
Edgar Andrew Cowles, . . . . .	Eldorado, Butler.
Robert Sherman Crandall, . . . . .	Newton, Harvey.
Claude Allen Crowl, . . . . .	Zeandale, Riley.
Everet William Cudney, . . . . .	Belpre, Edwards.
Herman L. Cudney, . . . . .	Belpre, Edwards.
Charles William Cummings, . . . . .	Wilmore, Comanche.
Roy Dale, . . . . .	Manhattan, Riley.
William E. Danielson, . . . . .	Clay Center, Clay.
Dickie Davies, . . . . .	Green, Clay.
Aurel N. Davis, . . . . .	Manhattan, Riley.
Edith Nellie Davis, . . . . .	Manhattan, Riley.
Loea Bessie DeArmond, . . . . .	Manhattan, Riley.
Florence B. Deputy, . . . . .	Manhattan, Riley.
Fred A. Diers, . . . . .	Kinsley, Edwards.
Charles Morton Dole, . . . . .	Dolespark, McPherson.
Jay L. Dow, . . . . .	Manhattan, Riley.
Odessa Della Dow, . . . . .	Manhattan, Riley.
Ula May Dow, . . . . .	Manhattan, Riley.
George Samuel Dreese, . . . . .	Halstead, Harvey.
Alice Ada Dresser, . . . . .	Manhattan, Riley.
Curtis Antony Eastwood, . . . . .	Berlin, Bourbon.
Perylle Avis Embry, . . . . .	Ottawa, Franklin.
James Renfrew Esdon, . . . . .	Olsburg, Pottawatomie.
Cas Nelson Estes, . . . . .	Stafford, Stafford.
Earl Joy Evans, . . . . .	Jewell, Jewell.
Williams K. Evans, . . . . .	Colby, Thomas.
Arthur Eugene Fairman, . . . . .	Wakefield, Clay.
Minter Farrar, . . . . .	Axtell, Marshall.
Lena Cora Fay, . . . . .	Wilsey, Morris.
Scott Stuart Fay, . . . . .	Wilsey, Morris.
Edith Louisa Felton, . . . . .	McPherson, McPherson.
Florence May Felton, . . . . .	McPherson, McPherson.
Harlow Ferguson, . . . . .	Wabaunsee, Wabaunsee.
Arba C. Ferris, . . . . .	Conway, McPherson.
Lathrop Weaver Fielding, . . . . .	Manhattan, Riley.
Lena Finley, . . . . .	Manhattan, Riley.
Fenton Burn Fleming, . . . . .	Athol, Smith.
Flora Fern Fleming, . . . . .	Smith Center, Smith.
Albert E. Foster, . . . . .	Powhattan, Brown.
Robert Anson Fulton, . . . . .	Beloit, Mitchell.
Christian A. Gabelman, . . . . .	Fairport, Ellis.
Clarence Elmer Gaddis, . . . . .	Cedarville, Smith.
Mary Eliza Gaden, . . . . .	Riley, Riley.
Newton Staley Gall, . . . . .	Reserve, Brown.
Philip Dudley Gardiner, . . . . .	Goddard, Sedgwick.
Eunice May Gates, . . . . .	Manhattan, Riley.

Name.	Post-office and county (or state).
Mary Mabel Gibbons, . . . . .	Capioma, Nemaha.
Charles A. Gilkison, . . . . .	Larned, Pawnee.
David E. Gish, . . . . .	Acme, Dickinson.
Oliver Holmes Gish, . . . . .	Acme, Dickinson.
Walter Givens, . . . . .	Seneca, Nemaha.
Charlotte E. Gledhill, . . . . .	Portis, Osborne.
Ralph Arthur Glick, . . . . .	Junction City, Geary.
Bessie Edith Goodyear, . . . . .	Oatville, Sedgwick.
Philip Goodyear, . . . . .	Oatville, Sedgwick.
Harry V. Graham, . . . . .	Beverly, Lincoln.
Elbert Ernest Greenough, . . . . .	Bennington, Ottawa.
Frederic James Griffing, . . . . .	Manhattan, Riley.
David H. Gripton, . . . . .	Smith Center, Smith.
Herbert Revere Groome, . . . . .	Manhattan, Riley.
Emil Theodore Haggman, . . . . .	Kackley, Republic.
Mabel Louise Hamilton, . . . . .	Manhattan, Riley.
Ben C. Hannam, . . . . .	Choctaw, <i>Oklahoma</i> .
Boline Hanson, . . . . .	Jamestown, Republic.
John Willson Harris, . . . . .	Chicago, <i>Illinois</i> .
John Harrison, . . . . .	Manhattan, Riley.
Nora Hays, . . . . .	Manhattan, (Pottawatomie).
Elsie Belle Heacock, . . . . .	Manhattan, Riley.
Harry Russell Heim, . . . . .	Lincoln, Lincoln.
George Elmer Hiner, . . . . .	McFarland, Wabaunsee.
Esther Cecelia Hjelm, . . . . .	Manhattan, Riley.
Inez Leota Hjort, . . . . .	Manhattan, Riley.
Benoni Hoffhines, . . . . .	Marquette, McPherson.
Ethel Hollinger, . . . . .	Rhinehart, Dickinson.
Joseph Allen Hollinger, . . . . .	Rhinehart, Dickinson.
Agnes L. Hopper, . . . . .	Arkansas City, Cowley.
Nicholas Friedriech Horn, . . . . .	Morrowville, Washington.
Anna Hostrup, . . . . .	Manhattan, Riley.
Bess May Howe, . . . . .	Manhattan, Riley.
Jennie Elmilam Howell, . . . . .	Manhattan, Riley.
Robert Hudgin, . . . . .	Hinton, <i>West Virginia</i> .
Edwin Alden Hutchison, . . . . .	Canton, McPherson.
Kate M. Hutchinson, . . . . .	Bellaire, Smith.
William Harry Ijams, . . . . .	Aurora, Cloud.
Helen C. Inskeep, . . . . .	Manhattan, (Pottawatomie).
William H. Irving, . . . . .	Baker, Brown.
Linnie A. Jacobs, . . . . .	Garrison, (Riley).
Susie C. Jacobs, . . . . .	Garrison, (Riley).
Alta L. Jewitt, . . . . .	Yates Center, Woodson.
Charles Fredrick Johnson, . . . . .	Mayday, Riley.
Charles Willard Johnson, . . . . .	Solomon Rapids, Mitchell.
Edna Johnson, . . . . .	Marysville, Marshall.
Oscar Johnson, . . . . .	Talmo, Republic.
Winifred Mae Johnson, . . . . .	Solomon Rapids, Mitchell.
Katherine Elizabeth Jones, . . . . .	Wamego, Pottawatomie.
Harry W. Judd, . . . . .	Manchester, Dickinson.
George Henry Kellogg, . . . . .	Manhattan, Riley.

Name.	Post-office and county (or state).
William Louis Kelly, . . . . .	Mayetta, Jackson.
Harry A. Kennedy, . . . . .	Lawrence, Douglas.
H. L. Kern, . . . . .	Kensington, Smith.
William Albert Kern, . . . . .	Kensington, Smith.
John Earl Keys, . . . . .	Neodesha, Wilson.
Pliny Whittier Keys, . . . . .	Gypsum, Saline.
John Fred Kindsvater, . . . . .	Manhattan, Riley.
Mildred I. Kirkwood, . . . . .	Marysville, Marshall.
Nina H. Kirkwood, . . . . .	Marysville, Marshall.
Joseph P. Klein, . . . . .	Manhattan, Riley.
Hans Hanson Krogh, . . . . .	Jamestown, (Republic).
Charles Kruger, . . . . .	Seneca, Nemaha.
Harry S. Lamborn, . . . . .	Burlington, Coffey.
Elmer Morton Langston, . . . . .	Tyner, Smith.
Albert Laravana Larson, . . . . .	Marquette, McPherson.
Will G. Lemmon, . . . . .	Nardin, <i>Oklahoma</i> .
Abraham L. Leonard, . . . . .	Ellis, Ellis.
Winnie K. Likes, . . . . .	Pomona, Franklin.
Amos Lester Lingard, . . . . .	Princeton, Franklin.
William Ljungdahl, . . . . .	Manhattan, (Geary).
Emmet Leroy Lock, . . . . .	Riley, Riley.
Vallie Myrtle Long, . . . . .	Simpson, Mitchell.
Herbert W. Loomis, . . . . .	Osborne, Osborne.
William L. Lyman, . . . . .	Manhattan, Riley.
William E. McAvoy, . . . . .	Iuka, Pratt.
James Arthur McBride, . . . . .	Pleasant Hill, <i>Missouri</i> .
Guy McComb, . . . . .	Maplehill, Wabaunsee.
Eugene McCorkle, . . . . .	Greatbend, Barton.
Margaret McCoy, . . . . .	Meriden, Jefferson.
Pearl Samuel McCune, . . . . .	Coldwater, Comanche.
Georgiana McCutchan, . . . . .	Wabaunsee, Wabaunsee.
Archie McElroy, . . . . .	Fort Worth, <i>Texas</i> .
Roy Munroe McKee, . . . . .	Offerle, Edwards.
Charles Edward McMillan, . . . . .	Plymouth, Lyon.
Alva Mabry, . . . . .	Little River, Rice.
Julius C. Maelzer, . . . . .	Vermilion, Marshall.
Frances Manchester, . . . . .	Chiles, Miami.
John Ellis Manley, . . . . .	Topeka, Shawnee.
Mable Marchant, . . . . .	Manhattan, Riley.
Lloyd Marriott, . . . . .	Denison, Jackson.
Harry R. Martin, . . . . .	Douglass, Butler.
Lloyd Cummins Matson, . . . . .	Longton, Elk.
Grace Burchett Maxey, . . . . .	Pomona, Franklin.
Richard Meyer, . . . . .	Riley, Riley.
Clarence Metcalf Miller, . . . . .	Manhattan, Riley.
Frank Miller, . . . . .	Milford, Geary.
Fred Carl Miller, . . . . .	Belvue, Pottawatomie.
William Waldron Molthrop, . . . . .	Concordia, Cloud.
Ira James Monroe, . . . . .	Whiting, Jackson.
Roy N. Monroe, . . . . .	Whiting, Jackson.
Gertrude May Moore, . . . . .	Pratt, Pratt.

Name.	Post-office and county (or state).
Edward Allen Morgan, . . . . .	Brainerd, Butler.
Marshall E. Morlan, . . . . .	Welcome, Geary.
James Morrison, . . . . .	Ford, Ford.
John Clemet Morrison, . . . . .	Greatbend, Barton.
Lewis Claude Morton, . . . . .	Osage City, Osage.
Willard Austin Moyer, . . . . .	Keats, Riley.
Mary Mudge, . . . . .	Manhattan, Riley.
Alvan Taylor Munger, . . . . .	Hollis, Cloud.
Lewis J. Munger, . . . . .	Hollis, Cloud.
Thomas Munyon, . . . . .	Conway, McPherson.
Dawn Victoria Murphy, . . . . .	Keats, Riley.
Kate Murray, . . . . .	Ogden, Riley.
Nellie Florence Nason, . . . . .	Rossville, Shawnee.
Fred Roy Neal, . . . . .	Fort Scott, Bourbon.
Bernard R. Nelson, . . . . .	Lawrence, Douglas.
Ross N. Newland, . . . . .	Groveland, McPherson.
Malcolm E. Nicholson, . . . . .	Council Grove, Morris.
Rachel Gertrude Nicholson, . . . . .	Manhattan, Riley.
Lloyd Nicklin, . . . . .	Emporia, Lyon.
Jens Nygard, . . . . .	Denmark, Lincoln.
Amer B. Nystrom, . . . . .	Topeka, Shawnee.
Segrid Elizabeth Nystrom, . . . . .	Topeka, Shawnee.
Lulu Gertrude O'Daniel, . . . . .	Manhattan, Riley.
Faye H. Oliver, . . . . .	Dwight, Morris.
Anna Matilda Olson, . . . . .	Manhattan, Riley.
Ralph Osborn, . . . . .	Emporia, Lyon.
Henry Otto, . . . . .	Philadelphia, <i>Pennsylvania</i> .
Charles Martin Paddock, . . . . .	Manhattan, Riley.
Rennick Rubenell Paine, . . . . .	Manhattan, Riley.
Nell Paulsen, . . . . .	Whiting, Jackson.
Leonard Marion Peairs, . . . . .	Lawrence, Douglas.
Grace D. Pearson, . . . . .	Humboldt, Allen.
Stella Jane Pearson, . . . . .	Humboldt, Allen.
John J. Peckham, . . . . .	Courtland, Republic.
Frank D. Pendleton, . . . . .	Paola, Miami.
Arthur Alexander R. Perrine, . . . . .	Newton, Harvey.
Edna M. Perry, . . . . .	Manhattan, Riley.
Edwin H. Peterson, . . . . .	Lyndon, Osage.
Maude May Phillips, . . . . .	Kackley, Republic.
Luther B. Pickett, . . . . .	Emporia, Lyon.
Helen Jay Piersol, . . . . .	Manhattan, Riley.
Daniel Webster Pilkington, . . . . .	Waverly, Coffey.
Lois Pinkham, . . . . .	Marysville, Marshall.
Floyd M. Pleasant, . . . . .	Lyndon, Osage.
Charles Holcomb Popenoe, . . . . .	Topeka, Shawnee.
Weston Mack Posey, . . . . .	Larned, Pawnee.
Alice Virginia Potter, . . . . .	Topeka, Shawnee.
John R. Powers, . . . . .	Los Angeles, <i>California</i> .
Emily Pritchard, . . . . .	Leonardville, Riley.
Nat A. Purcell, . . . . .	Manhattan, Riley.
Earl Thomas Pyle, . . . . .	Hoyt, Jackson.

Name.	Post-office and county (or state).
Harry Tricisy Pyle, . . . . .	Coldwater, Comanche.
Guilford G. Railsback, . . . . .	Langdon, Reno.
Leroy Ralph, . . . . .	Overbrook, Osage.
Raymond Ramage, . . . . .	Arkansas City, Cowley.
Alvin Josiah Reed, . . . . .	Saint Clere, Pottawatomie.
Ernest Carl Reed, . . . . .	Genoa, <i>Illinois</i> .
Harry Calvin Reeder, . . . . .	Logan, Phillips.
Pearl Stout Rees, . . . . .	Delphos, Ottawa.
Frank W. Reeves, . . . . .	Newton, Harvey.
Fanny E. Reynolds, . . . . .	Cawker City, Mitchell.
Bertie Fay Richards, . . . . .	Tyner, Smith.
Elvin Rickman, . . . . .	Manhattan, Riley.
Eva May Rickman, . . . . .	Manhattan, Riley.
Austin A. Ripley, . . . . .	Topeka, Shawnee.
Margaret Isabel Ritner, . . . . .	Manhattan, Riley.
Nellie Pearl Robbins, . . . . .	Manhattan, Riley.
Gomer John Roberts, . . . . .	Lebo, Coffey.
Rollo Raymond Rogers, . . . . .	Glasco, Cloud.
Stanley Rogers, . . . . .	Wathena, Doniphan.
William Rohrer, . . . . .	Donegal, Dickinson.
David Eugene Rose, . . . . .	Douglass, Butler.
Elmer D. Samson, . . . . .	Quinter, Gove.
Daisy Sawyer, . . . . .	Fairview, Brown.
Walter Ray Schenck, . . . . .	Tonganoxie, Leavenworth.
Martin William Schottler, . . . . .	Emporia, Lyon.
Oliver H. Schrepel, . . . . .	Ellinwood, Barton.
William Paul Schroeder, . . . . .	Lebanon, Smith.
Anna Bertha Schuler, . . . . .	Lawrence, Douglas.
Orville Oshell Scott, . . . . .	Hutchinson, Reno.
Carl Oliver Selig, . . . . .	Eldorado, Butler.
Garfield Shirley, . . . . .	Newman, Jefferson.
Lou Belle Shirley, . . . . .	Newman, Jefferson.
Martin Roy Shuler, . . . . .	Clifton, Washington.
Henry L. Silver, . . . . .	Cortland, <i>Nebraska</i> .
Edward Ray Sloan, . . . . .	Selden, Sheridan.
Anna Elizabeth Smith, . . . . .	Wabaunsee, Wabaunsee.
Jay Latimer Smith, . . . . .	Ozawkie, Jefferson.
Stanley Van Smith, . . . . .	Ozawkie, Jefferson.
Walter Emery Smith, . . . . .	Hall's Summit, Coffey.
Frank Sorgatz, . . . . .	Concordia, Cloud.
Zula E. Soupene, . . . . .	Manhattan, Riley.
Albert Delton Sparr, . . . . .	Conway Springs, Sumner.
Harvey Spencer, . . . . .	Millerton, Sumner.
George A. Spohr, . . . . .	Manhattan, Riley.
Julia C. Spohr, . . . . .	Manhattan, Riley.
Ernest Edgar Sprague, . . . . .	Selden, Sheridan.
Henry Adam Spuhler, . . . . .	Manhattan, Riley.
Fred G. Stambach, . . . . .	Osborne, Osborne.
Chester A. Steele, . . . . .	Manhattan, Riley.
Blanche Stevens, . . . . .	Humboldt, Allen.
Mabel Stevens, . . . . .	Humboldt, Allen.

Names.	Post-office and county (or state).
William H. Stewart, . . . . .	Overbrook, Osage.
Arthur Leroy Stickney, . . . . .	Stickney, Barton.
Janie Strong, . . . . .	Kensington, Smith.
John O. Sundstrom, . . . . .	Lindsborg, McPherson.
Alpha Elmer Sutton, . . . . .	Muscotah, Atchison.
Ernest Felix Swanson, . . . . .	Hollis, Cloud.
Jessie A. Sweet, . . . . .	Stockdale, Riley.
Ludie H. Swenson, . . . . .	Beloit, Mitchell.
James Melvin Taylor, . . . . .	Eureka, Greenwood.
Charles L. Thompson, . . . . .	Leon, Butler.
Rose S. Thompson, . . . . .	Garrison, Pottawatomie.
Will Frederick Thompson, . . . . .	Beloit, Mitchell.
May Thornton, . . . . .	Olathe, Johnson.
S. Ray Tilbury, . . . . .	Arkansas City, Cowley.
Eiba Todd, . . . . .	El Cristo, Cuba.
Joseph Miller Tomson, . . . . .	Dover, Shawnee.
Jessie Léona Travis, . . . . .	Oakley, Logan.
Allan Raymond Trobert, . . . . .	Manhattan, Riley.
James Monroe Trobert, . . . . .	Kelly, Nemaha.
Horace E. Ulrich, . . . . .	Manhattan, Riley.
Grace E. Umberger, . . . . .	Hymer, Chase.
Elliott Garfield Van Everen, . . . . .	Manhattan, Riley.
Lucy Faye Van Everen, . . . . .	Manhattan, Riley.
John Randolph Van Orsdel, . . . . .	Riley, Riley.
Charles A. Waldorf, . . . . .	Eldorado, Butler.
Frank Hannibal Walters, . . . . .	Manhattan, Riley.
Rebecca Rees Washington, . . . . .	Manhattan, Riley.
Charles Albertis Way, . . . . .	Canton, McPherson.
Joseph Franklin Weed, . . . . .	Athol, Smith.
Alberta M. Wenkheimer, . . . . .	Belpre, (Pawnee).
Gladys K. Wenkheimer, . . . . .	Belpre, (Pawnee).
Ralph B. Wentworth, . . . . .	Irving, Marshall.
Frank Giles West, . . . . .	Silverlake, Shawnee.
Georgiana West, . . . . .	Silverlake, Shawnee.
Milo Nathaniel Wever, . . . . .	Douglass, Butler.
Earl Wheeler, . . . . .	Bridgeport, Saline.
Inez Wheeler, . . . . .	Bridgeport, Saline.
Clarence H. White, . . . . .	Burlington, Coffey.
Harry White, . . . . .	Council Grove, Morris.
Hoyt White, . . . . .	Yates Center, Woodson.
Thomas F. White, . . . . .	Little River, Rice.
Solomon Whitney, . . . . .	Manhattan, Riley.
Ida A. Williams, . . . . .	Hull, Marshall.
John Henry Willig, . . . . .	Pavilion, Wabaunsee.
Vesta Williston, . . . . .	Manhattan, Riley.
Bertha May Wilson, . . . . .	Saint George, Pottawatomie.
Carl Emory Wilson, . . . . .	Emmons, Washington.
John W. Wilson, . . . . .	Selden, Sheridan.
Scott Wilson, . . . . .	Ozawkie, Jefferson.
Albert Lemont Wiltse, . . . . .	Downs, Osborne.
Paul H. Winne, . . . . .	Manhattan, Riley.

Name.	Post-office and county (or state).
Caroline Marie Winter, . . . . .	Manhattan, Riley.
Charles H. Withington, . . . . .	Allen, Lyon.
Cora E. Wood, . . . . .	Freeport, Harper.
Jay G. Worswick, . . . . .	Ozawkie, Jefferson.
George Leroy Wright, . . . . .	Marvin, Phillips.
Guy Yerkes, . . . . .	Hutchinson, Reno.
Charles H. Yost, . . . . .	Chester, <i>Nebraska</i> .

## PREPARATORY.

Roy Ablard, . . . . .	Delphos, Ottawa.
Edward Adams, . . . . .	Lyndon, Osage.
August H. Albrecht, . . . . .	Tipton, Mitchell.
William I. Alstead, . . . . .	Randolph, Riley.
Florence Olive Anderson, . . . . .	Randolph, Riley.
Hilma E. Anderson, . . . . .	Dwight, Morris.
Pearl Area, . . . . .	Westmoreland, Pottawatomie.
Lue Arnold, . . . . .	Louisville, Pottawatomie.
Jay Axtell, . . . . .	Fort Worth, <i>Texas</i> .
Roy F. Baker, . . . . .	Narka, Republic.
Cloise Baldwin, . . . . .	Erie, Neosho.
Clarence A. Balmer, . . . . .	Woodston, Rooks.
Willie P. Barber, . . . . .	Windom, McPherson.
Jessie Beryl Barnes, . . . . .	Agra, Phillips.
(Mrs.) Anna Bartel, . . . . .	Durham, Marion.
Charles O. Bates, . . . . .	Dighton, Lane.
Jesse Otto Baylor, . . . . .	Womer, Smith.
Elwin Orlando Beckwith, . . . . .	Larned, Pawnee.
Alvan E. Beeler, . . . . .	Grantville, Jefferson.
Ivan R. Beeler, . . . . .	Grantville, Jefferson.
Albert Bennett, . . . . .	Topeka, Shawnee.
John Bernritter, . . . . .	St. Mary's, Pottawatomie.
George Read Bisbey, . . . . .	Del Norte, <i>Colorado</i> .
Harry Louis Blachly, . . . . .	Walsburg, Riley.
Chester Blaylock, . . . . .	Saint Clere, Pottawatomie.
Harrie Bobenhouse, . . . . .	Narka, Republic.
William Fletcher Boggs, . . . . .	Tyner, Smith.
Orville Bowersox, . . . . .	Wayne, Republic.
Francis Boyd, . . . . .	Glenelder, Mitchell.
James Briggs, . . . . .	Manhattan, (Geary).
John Briggs, . . . . .	Manhattan, (Geary).
Edward Buckman, . . . . .	Topeka, Shawnee.
Ralph Buckman, . . . . .	Topeka, Shawnee.
Roy H. Buckman, . . . . .	Topeka, Shawnee.
William Burtner, . . . . .	Manhattan, Riley.
Frank Cale, . . . . .	Fort Scott, Bourbon.
James Calvert, . . . . .	Liberal, Seward.
Lee Milton Campbell, . . . . .	Manhattan, Riley.
Amy Carlson, . . . . .	Olsburg, Pottawatomie.
Harry Louis Carpenter, . . . . .	Wellsville, Franklin.
Robert Franklyn Carson, . . . . .	Junction City, Geary.
Uridge Melville Carson, . . . . .	Garden City, Finney.

Name.	Post-office and county (or state).
Daniel Carter, . . . . .	Solomon, Dickinson.
Charles Edward Chesterman, . . . . .	Larned, Pawnee.
Loy Francis Childress, . . . . .	Neodesha, Wilson.
Arthur Coffman, . . . . .	Shipton, Saline.
Edith E. Coffman, . . . . .	Manhattan, Riley.
William Alfred Collins, . . . . .	Garden City, Finney.
William Arthur Combrow, . . . . .	Greenleaf, Washington.
F. Guy Coshnett, . . . . .	Burrton, Harvey.
Irven James Cramer, . . . . .	Newton, Harvey.
Adelia Cree, . . . . .	Manhattan, Riley.
Albert Russell Crozier, . . . . .	Burdett, Pawnee.
Isabel Cunningham, . . . . .	Beattie, Marshall.
Harold S. Currier, . . . . .	Garnett, Anderson.
Maude Blanche Custer, . . . . .	St. George, Pottawatomie.
Curtis Lynn Daughters, . . . . .	Lincoln, Lincoln.
Lester Roy Davidson, . . . . .	Yates Center, Woodson.
Sadie Elizabeth Deibler, . . . . .	Manhattan, Riley.
Claude Ainslie DeLamater, . . . . .	Burlingame, Osage.
Clarence Earl Dickinson, . . . . .	Vining, Clay.
Walter Eugene Dickinson, . . . . .	Meriden, (Shawnee).
Bert Diller, . . . . .	Clay Center, Clay.
Emma Dole, . . . . .	Canton, McPherson.
Elmer H. Drake, . . . . .	Natoma, Osborne.
Herbert G. Drath, . . . . .	Herndon, Rawlins.
Howard J. Duncan, . . . . .	Salina, Saline.
John Lee Dunn, . . . . .	Russell, Russell.
Gustave Eastman, . . . . .	Ogden, Riley.
Esther E. Ericson, . . . . .	Manhattan, Riley.
Albert Franklin Everley, . . . . .	Glasco, Cloud.
Elvin Fagerberg, . . . . .	Olsburg, Pottawatomie.
Edwin E. Faris, . . . . .	Washington, Washington.
William Rickson Faris, . . . . .	Washington, Washington.
Gertrude Lucinda Fay, . . . . .	Topeka, Shawnee.
Elizabeth Harvie Fent, . . . . .	Tint, Butler.
Elmer Fickel, . . . . .	Wayne, Republic.
Albert Fred Fiechter, . . . . .	Robinson, Brown.
Edna J. Flatter, . . . . .	Manhattan, Riley.
Marion Hayden Fleming, . . . . .	Smith Center, Smith.
Morgan Flowers, . . . . .	Lincoln, <i>Nebraska</i> .
Oscar E. Forceman, . . . . .	Vliets, Marshall.
Philippus Nathaniel Franzen, . . . . .	Vliets, Marshall.
Charles Edmond Fuller, . . . . .	Maple City, Cowley.
Ray Willard Gage, . . . . .	Mont Ida, Anderson.
John M. Garrity, . . . . .	Perth, Sumner.
Ellen Gaskill, . . . . .	Osawkie, Jefferson.
Lucinda Gaskill, . . . . .	Osawkie, Jefferson.
Albert Gasser, . . . . .	Manhattan, Riley.
Gale Gibbons, . . . . .	Manhattan, Riley.
Giles Scott Gibson, . . . . .	Whiting, Jackson.
Ida May Gideon, . . . . .	Adrian, Jackson.
Arthur J. Gifford, . . . . .	Haviland, (Edwards).

Name.	Post-office and county (or state).
Arthur Goatley, . . . . .	Valley Hill, <i>Kentucky</i> .
Harry Ernest Gordon, . . . . .	Germantown, Brown.
George Albert Gosch, . . . . .	Sterling, Rice.
Aaron Guth, . . . . .	Pekin, Reno.
Jacob J. Haegert, . . . . .	Montrose, Jewell.
Leonard Andrean Haggman, . . . . .	Kackley, Republic.
George William Hale, . . . . .	Manhattan, Riley.
J. Earl Halferty, . . . . .	Conway, McPherson.
Emory E. Hamman, . . . . .	Strawn, Coffey.
Henry John Hamman, . . . . .	Hartford, (Coffey).
Ora Elmer Hammond, . . . . .	Tilley, <i>Missouri</i> .
Joy Belle Hancock, . . . . .	Manhattan, Riley.
Nathaniel Hanes, . . . . .	Claremore, <i>Indian Territory</i> .
Prudence Gertrude Hanes, . . . . .	Sageeyah, <i>Indian Territory</i> .
Jesse Lincoln Haney, . . . . .	Courtland, Republic.
Allen Hansford, . . . . .	Topeka, Shawnee.
Sophie Regina Hanson, . . . . .	Concordia, Cloud.
John Milburn Hardy, . . . . .	Manhattan, Riley.
Harry Hatten, . . . . .	Beattie, Marshall.
George W. Haulenbeck, . . . . .	Manhattan, Riley.
Gottlob C. Hauser, . . . . .	Galva, McPherson.
Mabel E. Haynes, . . . . .	Grantville, Jefferson.
Charles Robert Hedrick, . . . . .	Carthage, <i>Missouri</i> .
John Felix Heldstab, . . . . .	Holland, Dickinson.
William Hemphill, . . . . .	Lincoln, Lincoln.
Vara S. Hepler, . . . . .	Manhattan, Riley.
Charles Wilson Holmes, . . . . .	Chester, <i>Nebraska</i> .
Ada Statira Holroyd, . . . . .	Manhattan, Riley.
Clyde Monroe Hook, . . . . .	Rossville, Shawnee.
Roy Hilburn Horry, . . . . .	Beverly, Lincoln.
Ruby Abigail Howard, . . . . .	Fulton, <i>Oklahoma</i> .
Elbert Evens Huse, . . . . .	Manhattan, Riley.
Clyde Earnest Huston, . . . . .	Rosalia, Butler.
Guy Charles Hutchinson, . . . . .	Bellaire, Smith.
John Samuel Imel, . . . . .	Marion, Marion.
Thomas Burton Jackson, . . . . .	Stockton, Rooks.
Sylvan C. Jacobia, . . . . .	Fairview, Brown.
Victor Albin Jasperson, . . . . .	Scranton, Osage.
Josiah Anderson Jeter, . . . . .	Saint Clere, Pottawatomie.
Silas Edman Jeter, . . . . .	Saint Clere, Pottawatomie.
Romney Jewell, . . . . .	Manhattan, Riley.
William Jewett, . . . . .	Sutton, Lane.
Herman Berger Johnson, . . . . .	Axtell, Marshall.
Joseph Johnson, . . . . .	Vermilion, Marshall.
Oscar W. Johnson, . . . . .	Vermilion, Marshall.
Samuel F. Johnson, . . . . .	Carneiro, Ellsworth.
Cyrus Paul Jones, . . . . .	Mantey, Linn.
Edith Joslin, . . . . .	Randall, Jewell.
Sam E. Judd, . . . . .	Manchester, Dickinson.
Frank Keller, . . . . .	Silverlake, Shawnee.
David Simpson Kellogg, . . . . .	Manhattan, Riley.

Name.	Post-office and county (or state).
Esther Kempinsky, . . . . .	Newton, Harvey.
Orrin Kennedy, . . . . .	Lawrence, Douglas.
Albert Kessler, . . . . .	Topeka, Shawnee.
Emma Rosetta Lane, . . . . .	Tescott, Ottawa.
Mayme Adella Lane, . . . . .	Manhattan, Riley.
Otto J. Lang, . . . . .	Alma, Wabausnee.
Otis Lantis, . . . . .	Sedgwick, Harvey.
Tip H. Lantis, . . . . .	Sedgwick, Harvey.
Ralph Lilley, . . . . .	Star, Greenwood.
Charles H. Limbach, . . . . .	Sterling, Rice.
Katie Linhart, . . . . .	Irving, Marshall.
Alice Long, . . . . .	Detroit, Dickinson.
Chester Benjamin Loofbourrow, . . . . .	Norway, Republic.
Catherine Lowden, . . . . .	Belleville, Republic.
Melvin Ernest Lowry, . . . . .	Buckeye, Dickinson.
Maurice J. McAuliffe, . . . . .	Salina, Saline.
M. D. McComas, . . . . .	Westmoreland, Pottawatomie.
Arthur McCormick, . . . . .	Mounthope, Sedgwick.
Clyde Turner McGahey, . . . . .	Emporia, Lyon.
Ernest McGuire, . . . . .	Fairmount, Leavenworth.
Charles McIlwain, . . . . .	Caney, Montgomery.
Gideon McKee, . . . . .	Blue Rapids, Marshall.
Irwin Clarence McManis, . . . . .	Manhattan, Riley.
Obert McProud, . . . . .	Louisville, Pottawatomie.
Mark S. Mabry, . . . . .	Little River, Rice.
James Mack, . . . . .	Clyde, Cloud.
Sophia Malm, . . . . .	Manhattan, Riley.
Frank P. Manny, . . . . .	Winfield, Cowley.
Earl J. Margrave, . . . . .	Reserve, Brown.
Cleveland Taylor Martin, . . . . .	Meriden, (Jackson).
Paul Arthur Masheter, . . . . .	Sabetha, Nemaha.
Floyd M. Massey, . . . . .	Larned, (Edwards).
Chalmer A. Mather, . . . . .	Manhattan, Riley.
Vada Florence Mattox, . . . . .	Effingham, Atchison.
John May, . . . . .	Saint Paul, Neosho.
Omar Hugo Mehl, . . . . .	Burlingame, Osage.
Harry Miller, . . . . .	Larkin, Jackson.
Arel Mills, . . . . .	Garfield, Pawnee.
Jennie Emma Mitchell, . . . . .	Florence, Marion.
Nellie C. Mitchell, . . . . .	Manhattan, Riley.
Richard Mitchell, . . . . .	Lafontaine, Wilson.
Alvin W. Mogge, . . . . .	Halifax, Wabaunsee.
James Robert Moll, . . . . .	Little River, Rice.
Morton Monroe, . . . . .	Fairview, Brown.
John Carpenter Montgomery, . . . . .	New Lancaster, Miami.
Theodore Edward Morlan, . . . . .	Weston, Geary.
William Thomas Morrison, . . . . .	Phillipsburg, Phillips.
Hoyt George Morrow, . . . . .	Manhattan, Riley.
Ralph Aubert Morrow, . . . . .	Manhattan, Riley.
John W. Munson, . . . . .	Atchison, Atchison.
Bessie Myers, . . . . .	Ogden, Riley.

Name.	Post-office and county (or state).
Myra Myers, . . . . .	Marquette, McPherson.
Charles Edwin Neal, . . . . .	Fort Scott, Bourbon.
Ralph M. Neiman, . . . . .	Whitewater, Butler.
Charles Peter Nelson, . . . . .	Colbert, Lincoln.
Ervin A. Nixon, . . . . .	Ottawa, Franklin.
Arthur Leroy Olson, . . . . .	Manhattan, (Geary).
Harry Carl Olson, . . . . .	Parsons, Labette.
Roy Lynn Payton, . . . . .	Hoisington, Barton.
Clara Anna Peairs, . . . . .	Lawrence, Douglas.
Leroy Peckham, . . . . .	Haven, Reno.
Roy Ray Peckham, . . . . .	Courtland, Republic.
Alma Carlina Peterson, . . . . .	Randolph, Riley.
Charles Otto Peterson, . . . . .	Monument, Logan.
Raleigh Peterson, . . . . .	Junction City, Geary.
Frenda O. Pontius, . . . . .	Fairview, Brown.
Louis Weston Bates Pratt, . . . . .	Wabaunsee, Wabaunsee.
Bertha Pringle, . . . . .	Eskridge, Wabaunsee.
Myldred Pringle, . . . . .	Eskridge, Wabaunsee.
Henry J. Quesnoy, . . . . .	Manhattan, Riley.
Harry Byram Rawlins, . . . . .	Whiting, Jackson.
Harry Earl Reed, . . . . .	Stockton, Rooks.
Rosa M. Richter, . . . . .	Oskaloosa, Jefferson.
Lawrence Riley, . . . . .	Kipp, Saline.
Joseph Potter Rishel, . . . . .	Poe, Logan.
James Byrd Ritchie, . . . . .	Manhattan, Riley.
Noah Andrew Rittenhouse, . . . . .	Severance, Doniphan.
Charles Wray Rockey, . . . . .	Osage City, Osage.
Abe Lincoln Rogers, . . . . .	Willard, Shawnee.
Samuel Royer, . . . . .	Newton, Harvey.
Albert Cook Runciman, . . . . .	Culver, Ottawa.
Charles Henry Ryan, . . . . .	Muscotah, (Jackson).
Glen Ryan, . . . . .	Hope, Dickinson.
John Michael Ryan, . . . . .	Muscotah, (Jackson).
Edward Saint, . . . . .	Lyons, Rice.
Emma Scheideman, . . . . .	Lacrosse, Rush.
Otto Schild, . . . . .	Gerardy, Washington.
Henry Schwant, . . . . .	Wheaton, Pottawatomie.
Cleo Scofield, . . . . .	Manhattan, Riley.
Charles Delbert Scritchfield, . . . . .	Westmoreland, Pottawatomie.
Gertrude Scritchfield, . . . . .	Westmoreland, Pottawatomie.
Robert L. Seaton, . . . . .	Abilene, Dickinson.
George Edger Selby, . . . . .	Westmoreland, Pottawatomie.
Jeremiah James Selby, . . . . .	Westmoreland, Pottawatomie.
Ernest Warren Shaffer, . . . . .	Dover, (Wabaunsee).
Charles Reigart Shaw, . . . . .	Kansas City, Wyandotte.
James Griffets Sheldon, . . . . .	McLouth, Jefferson.
Herbert Berzelious Shields, . . . . .	Culver, Ottawa.
Samuel Webster Shields, . . . . .	Meriden, Jefferson.
Bessie V. Shinn, . . . . .	Millerton, Sumner.
Theodore B. Shinn, . . . . .	Millerton, Sumner.
Otto John Shuler, . . . . .	Halstead, Harvey.

Name.	Post-office and county (or state).
Ella May Whitehead Simair, . . . . .	Manhattan, Riley.
Julia Melvina Simair, . . . . .	Manhattan, Riley.
John M. Slothower, . . . . .	Delphos, Ottawa.
Bernard Smith, . . . . .	Haven, Reno.
Ira Davis Smith, . . . . .	St. Clere, Pottawatomie.
James N. Smith, . . . . .	Sterling, Rice.
Leslie V. Spiller, . . . . .	Beattie, Marshall.
Jacob K. Stark, . . . . .	Morrill, Brown.
Clara B. Steele, . . . . .	Manhattan, Riley.
Chester Lynn Steen, . . . . .	Westmoreland, Pottawatomie.
Edward F. Stein, . . . . .	Junction City, Geary.
D. W. Steinhour, . . . . .	Winfield, Cowley.
Ernest Frances Stewart, . . . . .	Douglass, Butler.
Flora I. Stewart, . . . . .	Media, Douglas.
Marion Curtis Strawn, . . . . .	Halfmound, Jefferson.
Frank M. Sutcliffe, . . . . .	Gove City, Gove.
Robert Maxwell Sutters, . . . . .	Gideon, Douglas.
Joseph F. Swoyer, . . . . .	Minneapolis, Ottawa.
Irene Alma Taylor, . . . . .	Chapman, Dickinson.
Roy Taylor, . . . . .	Madison, Greenwood.
Jerry Jasper Thomas, . . . . .	Belpre, Edwards.
John Isaac Thomas, . . . . .	Millerton, Sumner.
Lora May Thomas, . . . . .	Bala, Riley.
Harry Thompson, . . . . .	Garrison, Pottawatomie.
Mabel Addie Thompson, . . . . .	Manhattan, Riley.
Raymond Charles Thompson, . . . . .	Manhattan, Riley.
Wilbur Patterson Titsworth, . . . . .	Arkansas City, Cowley.
George H. Topliff, . . . . .	Glenelder, Mitchell.
Mervel Edwoy Arthur Totten, . . . . .	Huntsville, Reno.
Sadie Mae Travis, . . . . .	Oakley, Logan.
Otto Bliss Van Horn, . . . . .	Avoca, Jackson.
Herman C. Wahl, . . . . .	Wheaton, Pottawatomie.
John Wesley Walter, . . . . .	Riley, Riley.
Glen A. Warner, . . . . .	Mullinville, Kiowa.
William E. Weber, . . . . .	Monument, Logan.
Rufus Durkee Webster, . . . . .	Yates Center, Woodson.
Myron Wade Wheeler, . . . . .	Logan, Phillips.
Anna Jane Whipple, . . . . .	Olivet, Osage.
John Harrison White, . . . . .	Clifton, Washington.
Delbert Homer Wiggans, . . . . .	Michigan Valley, Osage.
Arthur N. Wilhelm, . . . . .	Manhattan, Riley.
Earl Williams, . . . . .	Pawnee Rock, Barton.
Ira A. Wilson, . . . . .	Winfield, Cowley.
Nelson B. Wilson, . . . . .	Fort Scott, Bourbon.
William George Wilson, . . . . .	Garfield, Pawnee.
Arch Lykins Woodrum, . . . . .	Stockton, Rooks.
Charles Loyd Work, . . . . .	Douglass, Butler.
Theodora Wright, . . . . .	Brookville, Saline.
George Franklin Yantis, . . . . .	Yantisville, <i>Illinois</i> .
John Yeagley, . . . . .	Marion, Marion.
James Walter Zahnley, . . . . .	Dwight, Morris.
Asa Calvin Zimmerman, . . . . .	Moray, Doniphan.

## SPECIAL STUDENTS.

Name.	Post-office and county (or state).
Gertrude A. Barnes, . . . . .	Blue Rapids, Marshall.
Eugenia DePriest, . . . . .	Salina, Saline.
Wilmer Falkenrich, . . . . .	Manhattan, (Pottawatomie).
(Mrs.) Anna Daisy Kessler Harvey, . . . . .	Arkalon, Seward.
Minnie May Hicks, . . . . .	Wamego, Pottawatomie.
Edna Belle Hood, . . . . .	Manhattan, Riley.
Fred H. Leidigh, . . . . .	Hutchinson, Reno.
Rhoda C. McCartney, . . . . .	Oakes, <i>North Dakota</i> .
Archie E. Moore, . . . . .	Manhattan, Riley.
Flora A. Nichols, . . . . .	Des Moines, <i>Iowa</i> .
Martha Nitcher, . . . . .	Ottawa, Franklin.
Edith Pearce, . . . . .	Baldwin, Douglas.
Sada Hart Shuler, . . . . .	Halstead, Harvey.
Emmette Wesley Simpson, . . . . .	Canton, McPherson.
Milton David Snodgrass, . . . . .	Manhattan, Riley.
Hibbard Henry Thomson, . . . . .	Wakarusa, Shawnee.
Roy Bingham Vrooman, . . . . .	Parsons, Labette.
Beth Walter, . . . . .	Riley, Riley.
(Mrs.) Anna B. Withington, . . . . .	Manhattan, Riley.

## DAIRY SHORT-COURSE STUDENTS.

Edward Adams, . . . . .	Lyndon, Osage.
Alfred Alleman, . . . . .	Irving, Marshall.
Jesse Oliver Ambler, . . . . .	Florence, Marion.
Joe A. Ambler, . . . . .	Florence, Marion.
Raymond P. Arnold, . . . . .	Longford, Clay.
Earle Maynard Baxter, . . . . .	Manhattan, Riley.
Albert Belcher, . . . . .	Eureka, Greenwood.
J. W. Bigger, . . . . .	North Topeka, Shawnee.
Herbert R. Blair, . . . . .	Solomon, (Saline).
John P. Bliss, . . . . .	Ottawa, Franklin.
Wilbur W. Boggs, . . . . .	Manhattan, Riley.
Walter L. J. Brown, . . . . .	Americus, Lyon.
Ralph Buckman, . . . . .	Topeka, Shawnee.
Charles T. Bull, . . . . .	Cimarron, Gray.
Maranda Walter Burton, . . . . .	Lone Star, Douglas.
Daniel Carter, . . . . .	Solomon, Dickinson.
Elmer L. Christensen, . . . . .	Marquette, McPherson.
Cecil M. Clark, . . . . .	Manhattan, Riley.
Robert Sherman Crandall, . . . . .	Newton, Harvey.
Glenne Davis, . . . . .	Clay Center, Clay.
Will C. DeSelm, . . . . .	Oakvale, Smith.
Gustave Eastman, . . . . .	Ogden, Riley.
Charles Frederick Eldredge, . . . . .	Porterville, Bourbon.
Walter P. Engle, . . . . .	Ramona, Marion.
Jesse O. French, . . . . .	Penalosa, Kingman.
Fred Frank Froelich, . . . . .	Solomon, Dickinson.
Arthur Goatley, . . . . .	Valley Hill, <i>Kentucky</i> .
Joseph Goode, . . . . .	Lenexa, Johnson.
H. P. Goodell, . . . . .	Hutchinson, Reno.

Name.	Post-office and county (or state).
George Guy Gordon, . . . . .	Sterling, Rice.
Clarence Joseph Griffin, . . . . .	Vining, Clay.
Elbert Hall, . . . . .	Clafin, Barton.
William Alex Hamilton, . . . . .	North Topeka, Shawnee.
W. Herbert Howard, . . . . .	Mechanicsburg, <i>Pennsylvania</i> .
George W. Hunt, . . . . .	Formosa, Jewell.
Luckey E. Jobe, . . . . .	Hall's Summit, Coffey.
Albert Kessler, . . . . .	Topeka, Shawnee.
Erastus A. Keys, . . . . .	Gypsum, Saline.
Pliny Whittier Keys, . . . . .	Gypsum, Saline.
Philip Leiser, . . . . .	North Topeka, Shawnee.
William Milroy Lockhart, . . . . .	Clay Center, Clay.
Thomas Earle McClelland, . . . . .	Topeka, Shawnee.
Clair T. McKee, . . . . .	Mulvane, Sumner.
Abner H. McManis, . . . . .	Beloit, Mitchell.
Leonard R. Manley, . . . . .	Topeka, Shawnee.
Andy Mantz, . . . . .	Heizer, Barton.
George E. Merritt, . . . . .	Greatbend, Barton.
Ralph R. Miller, . . . . .	Macksville, Stafford.
Roy Lynn Payton, . . . . .	Hoisington, Barton.
C. A. Peairs, . . . . .	Chilocco, <i>Oklahoma</i> .
J. W. Pilkington, . . . . .	Waverly, Coffey.
Arthur James Rathbone, . . . . .	Manhattan, Riley.
Clinton Edwin Rathbun, . . . . .	Downs, Osborne.
Seneca H. Remington, . . . . .	Clay Center, Clay.
Dana Schlaegel, . . . . .	Oneida, Nemaha.
Otto M. Schulz, . . . . .	Walnut, Crawford.
Coridon Mental Shepherd, . . . . .	Wakefield, Clay.
Perry E. Snodgrass, . . . . .	Louisville, Pottawatomie.
Roy Taylor, . . . . .	Madison, Greenwood.
Charles Frederick Thestrup, . . . . .	Williamsburg, Franklin.
Frank A. Wakefield, . . . . .	Kansas City, <i>Missouri</i> .
Leroy Weddle, . . . . .	Louisville, Pottawatomie.
Myron Wade Wheeler, . . . . .	Logan, Phillips.
John W. White, . . . . .	Americus, Lyon.
Andrew Wilson, . . . . .	Brewster, Thomas.
Charles Clarence Winsler, . . . . .	Abilene, Dickinson.

## FARMERS' SHORT-COURSE STUDENTS—SECOND TERM.

Charles M. Baird, . . . . .	Arkansas City, Cowley.
Harrison Roy Betz, . . . . .	Chapman, Dickinson.
Richard E. Brown, . . . . .	Whiting, Jackson.
Stanley Penrhyn Clark, . . . . .	Manhattan, Riley.
Bernard A. Felton, . . . . .	McPherson, McPherson.
Roy Gilmore, . . . . .	Oneida, Nemaha.
John Faubion Goode, . . . . .	Lenexa, Johnson.
John Guise, . . . . .	Oneida, Nemaha.
Victor Emanuel Hanson, . . . . .	Olsburg, Pottawatomie.
J. Arthur Hutchinson, . . . . .	Bellaire, Smith.
Alex. Ferdinand Johnson, . . . . .	Morganville, Clay.
George O. Learned, . . . . .	Stafford, Stafford.

Name.	Post-office and county (or state).
J. Fred Marvin, . . . . .	Olathe, Johnson.
Harry Star Powell, . . . . .	Frankfort, Marshall.
Elizabeth Rubart, . . . . .	Junction City, Geary.
Carl W. Rutty, . . . . .	Meriden, Jefferson.
Arthur E. Schlaegel, . . . . .	Oneida, Nemaha.
Jacob A. Schowalter, . . . . .	Halstead, Harvey.
Leroy Elsworth Sharer, . . . . .	Monument, (Thomas).
Luther Henry Sharer, . . . . .	Monument, Logan.
Ward Simon, . . . . .	Soldier, Jackson.
William Dole True, . . . . .	Mankato, Jewell.
Frank R. Weisgerber, . . . . .	Mentor, Saline.
Ira Dean Whitaker, . . . . .	Chiles, Miami.

## FARMERS SHORT-COURSE STUDENTS—FIRST TERM.

Henry Dow Ames, . . . . .	Riley, Riley.
Irvin Garfield Ames, . . . . .	Riley, Riley.
Reuben A. Anderson, . . . . .	Agenda, Republic.
Henry Walter Ashcraft, . . . . .	Manchester, Dickinson.
Ralph Baker, . . . . .	Saxman, Rice.
Sylvester Baringer, . . . . .	Beattie, Marshall.
Walter C. Baumgartner, . . . . .	Newton, Harvey.
John Jacob Beck, . . . . .	Nickerson, Reno.
Victor Bull, . . . . .	Marysville, Marshall.
Clarence W. Carter, . . . . .	Louisburg, Miami.
Guerdon G. Charlton, . . . . .	Lawrence, (Jefferson).
Olin Garfield Cline, . . . . .	Liberal, Seward.
Lawrence Warren Colton, . . . . .	Glasco, Cloud.
Norton Horace Cooper, . . . . .	Menoken, Shawnee.
Ernest Emmons Courter, . . . . .	Downs, Osborne.
Howard B. Cox, . . . . .	Findlay, Linn.
Arthur W. Davidson, . . . . .	Dillon, Dickinson.
Elmer S. Davis, . . . . .	Gaylord, Smith.
Melvin John Davisson, . . . . .	Beattie, Marshall.
Edgar Hamilton Dearborn, . . . . .	Silverlake, Shawnee.
Melville Robert Dill, . . . . .	Eskridge, Wabaunsee.
Roy W. Dilsaver, . . . . .	Athol, Smith.
A. B. C. Dubach, . . . . .	Wathena, Doniphan.
Howard E. Duncan, . . . . .	Conway Springs, Sumner.
Ezra Engle, . . . . .	Abilene, (Grant).
John H. Fee, . . . . .	Sylvia, Reno.
Mortiermer Shontz Furst, . . . . .	Peabody, Marion.
Dan F. Gise, . . . . .	Beloit, Mitchell.
Frederic Halvert Gledhill, . . . . .	Portis, Osborne.
Zenas E. Godfrey, . . . . .	Arkansas City, Cowley.
Roscoe Good, . . . . .	Cimarron, Gray.
Harry Earnest Gordon, . . . . .	Germantown, Brown.
Philip Levi Griebel, . . . . .	Webster, Rooks.
Edward Rheinolt Grosser, . . . . .	Enterprise, Dickinson.
Edward N. Hall, . . . . .	Junction City, Geary.
R. M. Hammond, . . . . .	Portis, (Smith).
Watson P. Handley, . . . . .	Monument, Logan.

Name.	Post-office and county (or state).
Frank Martin Hanson, . . . . .	Concordia, Cloud.
Grover C. Hattan, . . . . .	Mounthope, Sedgwick.
Orlo Bertie Haven, . . . . .	Belleville, Republic.
Arthur Bland Hayes, . . . . .	Greatbend, Barton.
Arthur Hisey, . . . . .	Lenora, Norton.
Clyde A. Hobson, . . . . .	Hardy, <i>Nebraska</i> .
Carol Bertie Johnson, . . . . .	Olsburg, Pottawatomie.
G. Victor Johnson, . . . . .	Axtell, Marshall.
George Kaad, . . . . .	Jamestown, Cloud.
Clarence King, . . . . .	Potwin, Butler.
Forrest M. King, . . . . .	Winfield, Cowley.
Charles Kleopfer, . . . . .	Hope, Dickinson.
Frank Kletecka, . . . . .	Huntsville, Reno.
Otis Lantis, . . . . .	Sedgwick, Harvey.
Tip H. Lantis, . . . . .	Sedgwick, Harvey.
J. A. McFadden, . . . . .	Stafford, Stafford.
Ralph Ira Martin, . . . . .	Louisburg, Miami.
Floyd M. Massey, . . . . .	Larned, Pawnee.
Carl Joseph Miller, . . . . .	Tisdale, Cowley.
James Miller, . . . . .	Tisdale, Cowley.
O. W. Minear, . . . . .	Canton, McPherson.
Alphonso Pitt Morse, . . . . .	Hiawatha, Brown.
Harry S. Moser, . . . . .	Silverlake, Shawnee.
Lewis J. Munger, . . . . .	Hollis, Cloud.
Charles Edwin Neal, . . . . .	Fort Scott, Bourbon.
William Nelson, . . . . .	Marysville, Marshall.
Malvin C. Newell, . . . . .	Stafford, Stafford.
Arthur E. Oden, . . . . .	Sterling, Rice.
Burgess Odor, . . . . .	Gibbon, <i>Oklahoma</i> .
Anson Clifford Olin, . . . . .	Eudora, Douglas.
Leroy Peckham, . . . . .	Haven, Reno.
Axel Hugo Peterson, . . . . .	Saint Mary's, Pottawatomie.
Earl Raymond Poteet, . . . . .	Red Bridge, <i>Missouri</i> .
Ralph Marty Poteet, . . . . .	Red Bridge, <i>Missouri</i> .
William M. Powell, . . . . .	Hardy, <i>Nebraska</i> .
Otto A. Praeger, . . . . .	Claffin, Barton.
Isaac L. Pyke, . . . . .	Detroit, Dickinson.
Frank W. Reeves, . . . . .	Newton, Harvey.
David Eugene Rose, . . . . .	Douglass, Butler.
Charles Henry Ryan, . . . . .	Muscotah, (Jackson).
Glen Ryan, . . . . .	Hope, Dickinson.
Vincent Conkling Sage, . . . . .	Willard, Shawnee.
Park Ennis Salter, . . . . .	Augusta, Butler.
Dan T. Schmitt, . . . . .	Halstead, Harvey.
Robert L. Seaton, . . . . .	Abilene, Dickinson.
James Benjamin Sherwood, . . . . .	Concordia, (Republic).
Gomer Estell Shouse, . . . . .	Shields, Lane.
O. H. Smith, . . . . .	Galva, McPherson.
Chester Ivyl Spangler, . . . . .	Perth, Sumner.
Hal. Lewis Sponsler, . . . . .	Hutchinson, Reno.
Seth Steele, . . . . .	Eldorado, Butler.

Name.	Post-office and county (or state).
Bayard D. Stratton, . . . . .	Ottawa, Franklin.
Victor Swanson, . . . . .	Vliets, Marshall.
John Isaac Thomas, . . . . .	Millerton, Sumner.
Leslie N. Tinkler, . . . . .	Gypsum, Saline.
Merval Edwoy Arthur Totten, . . . . .	Huntsville, Reno.
Charles Albertis Way, . . . . .	Canton, McPherson.
Jesse C. Weaver, . . . . .	Wakefield, Clay.
Edward Welter, . . . . .	Myers Valley, Pottawatomie.
Ira Jasper Windbigler, . . . . .	Altamont, Labette.
Leonard Wingfield, . . . . .	Junction City, Geary.
William C. Wise, . . . . .	Lawrence, Douglas.
John Perry Wood, . . . . .	Freeport, Harper.
Arch Lykins Woodrum, . . . . .	Stockton, Rooks.

## DOMESTIC SCIENCE SHORT-COURSE STUDENTS—SECOND TERM.

Emma Bork, . . . . .	Axtell, Marshall.
Anna B. Cole, . . . . .	Manhattan, Riley.
Emma Dole, . . . . .	Dolepark, McPherson.
Dorothy Gehrett, . . . . .	Atchison, Atchison.
Barbara Elizabeth Grimm, . . . . .	Bonaccord, Dickinson.
Signa J. Ipsen, . . . . .	Randolph, (Pottawatomie).
Cecelia Larson, . . . . .	Vesper, Lincoln.
Mabel M. Rooney, . . . . .	Fairview, Brown.
Flora Isabel Stewart, . . . . .	Media, Douglas.

## DOMESTIC SCIENCE SHORT-COURSE STUDENTS—FIRST TERM.

Addie Adams, . . . . .	Ozawkie, Jefferson.
Jessie Allen, . . . . .	Zeandale, Riley.
Dora Eva Allman, . . . . .	Ellis, (Trego).
Alice Anderson, . . . . .	Zeandale, Riley.
Grace Bicknell, . . . . .	Hoisington, Barton.
Margaret Bigelow, . . . . .	Yates Center, Woodson.
Effie Alma Crawford, . . . . .	Paola, Miami.
Minnie Bertha Doll, . . . . .	Larned, Pawnee.
Bessie Pearl Dorman, . . . . .	Wabaunsee, Wabaunsee.
Leonora Darlin Eggen, . . . . .	Florence, Marion.
M. Edna Haney, . . . . .	Williamsburg, Franklin.
Vara S. Hepler, . . . . .	Manhattan, Riley.
Cora B. Janes, . . . . .	Quincy, <i>Illinois</i> .
Clara Bessie Kessler, . . . . .	Topeka, Shawnee.
Sadie Elizabeth Knight, . . . . .	Manhattan, Riley.
Winnie K. Likes, . . . . .	Pomona, Franklin.
Margerette A. McCullough, . . . . .	Minneapolis, Ottawa.
Laura Markham, . . . . .	Throop, Washington.
Viola Mae Martin, . . . . .	Garnett, Anderson.
Etta B. Metler, . . . . .	Manhattan, Riley.
Flora A. Nichols, . . . . .	Des Moines, <i>Iowa</i> .
Mattie E. Page, . . . . .	Ellis, Ellis.
Edna Rader, . . . . .	Manhattan, Riley.
Clara Edith Shapps, . . . . .	Zeandale, Riley.
Lyda Smith, . . . . .	Manhattan, Riley.

Name.	Post-office and county (or state).
Nellie Tufts, . . . . .	Jamestown, Cloud.
Mattie H. Willard, . . . . .	Manhattan, Riley.
(Mrs.) Anna B. Withington, . . . . .	Manhattan, Riley.
Reba Wolf, . . . . .	Manhattan, Riley.
Alba M. Woods, . . . . .	Saint George, Pottawatomie.
Hannah Worthington, . . . . .	Ackerland, Leavenworth.
Sarah D. Yeagley, . . . . .	Marion, Marion.

## APPRENTICES IN SHOPS.

Hugh Allen, . . . . .	Burns, Marion.
Will A. Barker, . . . . .	Holton, Jackson.
Jesse Otto Baylor, . . . . .	Womer, Smith.
Eben D. Brockway, . . . . .	Wellsville, Franklin.
Fred Buckmaster, . . . . .	Manhattan, Riley.
Robert Burkholder, . . . . .	Aulne, Marion.
Pearl Winfield Cloud, . . . . .	Hamlin, Brown.
Lawrence Warren Colton, . . . . .	Glasco, Cloud.
Albert V. Compton, . . . . .	Willis, Brown.
James I. Cunningham, . . . . .	Beattie, Marshall.
Edgar Hamilton Dearborn, . . . . .	Silverlake, Shawnee.
Clarence Earl Dickinson, . . . . .	Vining, Clay.
Julius W. Dinse, . . . . .	Elmo, Dickinson.
S. Marion Enfield, . . . . .	Sterling, Rice.
Byron L. Evans, . . . . .	Mankato, Jewell.
Ben. T. Farman, . . . . .	Neosho Falls, Woodson.
Alex J. Fraser, . . . . .	Peabody, Marion.
Elmer Gardner, . . . . .	Clifton, (Clay).
John V. Goodsheller, . . . . .	McPherson, McPherson.
John Otto Greenwalt, . . . . .	Princeton, Franklin.
Fred J. Griffing, . . . . .	Topeka, Shawnee.
John Julius Hansen, . . . . .	Burns, Marion.
William Morrill Hite, . . . . .	Baker, Brown.
Joe Hovel, . . . . .	Cuba, Republic.
John H. Janzen, . . . . .	Moundridge, (Harvey).
Silas Edman Jeter, . . . . .	Saint Clere, Pottawatomie.
Willis Harmon Johnson, . . . . .	Codell, Rooks.
Sam E. Judd, . . . . .	Manchester, Dickinson.
John Henry Kindsvater, . . . . .	Manhattan, Riley.
Van J. Kubin, . . . . .	McPherson, McPherson.
Bert McClelland, . . . . .	Maplehill, Wabaunsee.
Fred Evert McManis, . . . . .	Manhattan, Riley.
Fred Marty, . . . . .	Longford, Clay.
Earle B. Millard, . . . . .	Manhattan, Riley.
George C. Milne, . . . . .	Peabody, Marion.
John Rutherford Minis, . . . . .	Manhattan, Riley.
Lloyd D. Murray, . . . . .	Council Grove, Morris.
George G. Neff, . . . . .	Kincaid, Anderson.
Arnold Nelson, . . . . .	Greenleaf, Washington.
Robert W. Oakes, . . . . .	McPherson, McPherson.
Carl Peter August Palmer, . . . . .	Cleburne, Riley.
John Thompson Parker, . . . . .	Lakin, Kearny.

Name.	Post-office and county (or state).
Fred Augusta Patterson, . . . . .	Cottonwood Falls, Chase.
Charles E. Peterson, . . . . .	Morganville, Clay.
John A. Piper, . . . . .	Emporia, Lyon.
Benjamin C. E. Roberson, . . . . .	Belleplaine, Sumner.
Earl Rouse, . . . . .	Cawker City, Mitchell.
George W. Rundell, . . . . .	Stafford, Stafford.
Edward Arthur Saint, . . . . .	Lyons, Rice.
Granville Bond Scanland, . . . . .	Randall, Jewell.
Charles W. Setzer, . . . . .	Goddard, Sedgwick.
Harry Allen Shuyler, . . . . .	Nickerson, Reno.
Bert L. Sitler, . . . . .	Axtell, Marshall.
Stephon Oscar Stanfield, . . . . .	Mountayr, Osborne.
Arthur Leroy Stauffer, . . . . .	South Haven, Sumner.
Benjamin B. Stauffer, . . . . .	South Haven, Sumner.
Robert Maxwell Sutters, . . . . .	Gideon, Douglas.
Hayes J. Truax, . . . . .	Peabody, (Harvey).
William A. Turner, . . . . .	Rock Creek, Jefferson.
Daniel Unruh, . . . . .	Dundee, Barton.
Gordon L. Voiles, . . . . .	Manhattan, Riley.
A. B. Ward, . . . . .	Manhattan, Riley.
Ralph Kirkland Ware, . . . . .	Manhattan, Riley.
Elmer L. W. Whitney, . . . . .	Cuba, Republic.
Herman Whitney, . . . . .	Cuba, Republic.
Arthur Ward Willits, . . . . .	Kensington, Smith.
Charles H. Yost, . . . . .	Chester, <i>Nebraska</i> .

## APPRENTICES IN PRINTING.

Amy Alena Allen, . . . . .	Manhattan, Riley.
Bertha May Dana, . . . . .	Manhattan, Riley.
Azelia Lewis, . . . . .	Blue Rapids, Marshall.
J. F. Mitchell, . . . . .	Burlingame, Osage.
Frank Neal, . . . . .	Topeka, Shawnee.

## APPRENTICES IN DAIRYING.

Edward Adams, . . . . .	Lyndon, Osage.
Raymond P. Arnold, . . . . .	Longford, Clay.
Cecil M. Clark, . . . . .	Manhattan, Riley.
Gustave Eastman, . . . . .	Ogden, Riley.
Fred Frank Froelich, . . . . .	Solomon, Dickinson.
Arthur Goatley, . . . . .	Valley Hill, <i>Kentucky</i> .
W. Herbert Howard, . . . . .	Mechanicsburg, <i>Pennsylvania</i>
George W. Hunt, . . . . .	Formosa, Jewell.
Abner H. McManis, . . . . .	Beloit, Mitchell.
Leonard R. Manley, . . . . .	Topeka, Shawnee.
Ralph R. Miller, . . . . .	Macksville, Stafford.
Roy Lynn Payton, . . . . .	Hoisington, Barton.
Arthur Downes Shepard, . . . . .	Wayne, Republic.
Roy Taylor, . . . . .	Madison, Greenwood.
Frank V. Weathers, . . . . .	Howard, Elk.

## SUMMARY.

CLASSES.	Men.	Women.	Totals.
Graduate.....	15	17	32
Senior.....	42	23	65
Junior.....	81	39	120
Sophomore.....	130	76	206
Freshman.....	280	116	396
Preparatory.....	239	59	298
Special.....	7	12	19
Dairy.....	66	.....	66
Farmers' short course.....	124	1	125
Domestic science short course.....	.....	41	41
Apprentices.....	84	3	87
Counted twice.....	51	8	59
Totals.....	1,017	379	1,396

From 90 counties of Kansas, 1334.

From 17 other states, 62.

## RECORD OF ATTENDANCE, 1879-1902.

COLLEGE YEAR.	Domestic science short course...	Farmers' short course.....	Dairy.....	Apprentices.....	Hospitalants.....	Special.....	Preparatory *....	First year.....	Second year.....	Third year.....	Fourth year....	Postgraduates...	Counted twice....	Total.....	Graduated.....
1878-79	...	...	...	...	...	1	.....	89	89	16	12	.....	...	207	9
1879-80†	...	...	...	...	...	1	.....	166	61	35	11	2	...	276	7
1880-81†	...	...	...	...	...	6	.....	178	48	24	9	2	...	267	8
1881-82	...	...	...	...	...	5	.....	227	50	19	11	.....	...	312	9
1882-83	...	...	...	...	...	4	.....	241	60	30	12	.....	...	347	12
1883-84	...	...	...	...	...	2	.....	255	92	26	18	2	...	395	17
1884-85	...	...	...	...	...	2	.....	271	71	36	16	5	...	402	14
1885-86	...	...	...	...	...	1	.....	273	91	35	24	4	...	428	21
1886-87	...	...	...	...	...	...	.....	303	100	44	24	10	...	481	21
1887-88	...	...	...	...	...	...	.....	305	92	46	27	2	...	472	22
1888-89†	...	...	...	...	...	...	.....	266	103	41	28	7	...	445	25
1889-90	...	...	...	...	...	1	.....	307	105	63	28	10	...	514	27
1890-91†	...	...	...	...	...	...	.....	343	135	50	53	12	...	593	52
1891-92	...	...	...	...	...	...	.....	336	139	62	37	10	...	584	35
1892-93	...	...	...	...	...	...	.....	339	110	66	43	29	...	587	39
1893-94	...	...	...	...	...	...	.....	275	141	72	42	25	...	555	39
1894-95	...	...	...	...	...	5	.....	276	108	89	64	30	...	572	57
1895-96	...	...	...	...	...	3	.....	353	121	67	71	32	...	647	66
1896-97*	...	...	...	...	...	6	67	321	163	69	62	46	...	734	55
1897-98	...	6	9	...	15	77	...	316	174	77	82	57	10	803	69
1898-99	...	26	35	...	40	110	...	306	177	92	65	40	20	871	53
1899-00†	24	47	51	50	32	162	375	163	109	69	27	22	1,094	58	
1900-01	47	109	72	79	2	318	348	183	80	74	40	52	1,320	69	
1901-02	41	125	66	87	19	298	396	206	120	65	32	59	1,396	...	

\* Previous to 1896-'97 the preparatory students were not listed separately from the first-years.

† Requirements for admittance raised.

‡ Course strengthened.

## *Graduates.*

This list is made from the best data obtainable. A favor will be conferred by notifying the College Secretary of any errors or changes.

### 1867.

Henry L. Denison, A. M., 1257 Clarkson street, Denver, Colo. Official stenographer.  
 Belle M. (Haines) Pond, A. M., 1821 Clay street, Topeka, Kan. Housewife.  
 Emma L. (Haines) Bowen, A. M., Manhattan, Kan. Housewife.  
 John J. Points, A. M., Omaha, Neb. Lawyer.  
 Martha A. (White) Abbott, A. M., 283 South Oakley avenue, Chicago, Ill. Housewife.

### 1871.

Emily M. (Campbell) Robinson, A. B. Died in 1877.  
 Ella F. (Denison) Whedon, A. B., 1845 D street, Lincoln, Neb. Housewife.  
 Luella M. Houston, A. B., Galveston, Tex. Milliner and dressmaker.  
 Charles O. Whedon, B. S., 1845 D street, Lincoln, Neb. Lawyer.  
 Kate E. (White) Turley, A. B., Chicago, Ill. Housewife.

### 1872.

Theophania M. (Haines) Huntington, A. B. Died in 1880.  
 Albert Todd, A. M., Presidio, Cal. Captain Sixth U. S. artillery.  
 S. Wendell Williston, A. M., M. D., Ph. D., Lawrence, Kan. Dean of medical school, University of Kansas.

### 1873.

Eliza Z. (Davis) Stringfield, A. B., 1111 Santee street, Los Angeles, Cal. Housewife.  
 Sam Kimble, A. B., Manhattan, Kan. Lawyer; judge twenty-first district.

### 1874.

Harry A. Brous, A. M., M. D., Manhattan, Kan. Physician.  
 Edgar F. Clark, A. B., New Whatcom, Wash. Lawyer and post-office inspector.  
 John E. Davis, B. S., D. D. S., 737 Oak street, Columbus, Ohio. Dentist.  
 William D. Gilbert, A. B., Atchison, Kan. Lawyer; inspector of rural free-delivery routes.  
 A. Judson White, A. B., Manhattan, Kan. Minister.

### 1875.

Reuben E. Lofinck, B. S., Manhattan, Kan. Merchant.  
 Alice E. (Stewart) Points, A. M. Teacher.

### 1876.

George A. Gale, A. B., Mangona, Fla. Merchant and postmaster.  
 Ella M. (Gale) Kedzie, A. B., Lansing, Mich. Teacher of art.  
 Nellie (Sawyer) Kedzie Jones, M. S., Berea, Ky. Housewife.  
 Carrie M. Kimball, A. B., Garden Grove, Cal. Art instructor.  
 Minerva E. (Whitman) Heiser, A. B., Lyndon, Kan. Housewife.

### 1877.\*

Ella S. Child, Manhattan, Kan. Dressmaker.  
 George H. Failyer, M. S., Manhattan, Kan.  
 John S. Griffing, M. S., Manhattan, Kan. Teamster for farm department Kansas State Agricultural College.  
 Walter C. Howard, Penryn, Placer county, California. Minister.  
 Frederick O. Hoyt. Died in 1884.  
 Louis E. Humphrey, Chapman, Kan. Druggist.  
 James F. La Tourette, Idaho Springs, Colo. Miner.  
 Marion F. Leasure, L. L. B., Lacygne, Kan. Lawyer.  
 William Ulrich, M. S., Manhattan, Kan. Contractor and builder.

\*B. S. has been granted all graduates since 1877.

**1878.\***

Albert N. Godfrey, M. S., Port Townsend, Wash. United States customs service.  
 Charles S. McConnell. Died in 1902.  
 George S. Platt. Died in 1878.  
 Amos E. Wilson, Leavenworth, Kan. Banker.

**1879.\***

Arthur T. Blain, Lacanada, Cal. Nurseryman.  
 Etta (Campbell) Blain, Lacanada, Cal. Housewife.  
 Wilmer K. Eckman, Longview, Tex. Bank cashier.  
 Corvin J. Reed, St. Clere, Kan. Farmer.  
 Harry C. Rushmore, 723 Buchanan street, Topeka, Kan. Commercial traveler.  
 Wm. H. Sikes, Leonardville, Kan. Merchant and grain dealer.  
 Lewis A. Salter, Camden, Okla. Lawyer.  
 Ella (Vincent) McCormick, Broughton, Kan. Bookkeeper.  
 Clarence E. Wood, A. B., Cherokee, Okla. Editor.

**1880.\***

Augustine Beacham, Seattle, Wash. Principal of schools.  
 Lizzie R. (Cox) Kregar, Milford, Kan. Housewife.  
 Emma (Hoyt) Turner, Peru, Ill. Housewife.  
 Emma (Knostman) Huse, Manhattan, Kan. Housewife.  
 Grace (Parker) Perry, Pocatello, Idaho. Housewife.  
 Noble A. Richardson, San Bernardino, Cal. Superintendent of city schools.  
 Maria E. (Sickels) Davis, Chicago, Ill. Housewife.

**1881.\***

Flora (Donaldson) Reed, St. Clere, Kan. Housewife.  
 Ulysses G. Houston, Kingfisher, Okla. Lecturer.  
 Fletcher M. Jeffrey, 313 and 314 Pioneer building, Seattle, Wash. Lawyer.  
 William J. Jeffrey. Died in 1900.  
 Darwin S. Leach, —, Africa.  
 William J. Lightfoot, 4557 Twenty-seventh avenue, Denver, Colo. United States examiner of surveys.  
 Dalinda (Mason) Cotey, Logan, Utah. Professor of domestic arts, State Agricultural College of Utah.  
 Wirt S. Myers, Tampa, Fla. Furniture manufacturer.

**1882.\***

J. Chester Allen. Died in 1885.  
 Ida (Crawford) Sloan.  
 Edward V. Cripps.  
 Warren Knaus, M. S., McPherson, Kan. Editor.  
 Mattie E. (Mails) Coons, Manhattan, Kan. Housewife.  
 Allie S. (Peckham) Cordry, Hutchinson, Kan. Housewife and art teacher.  
 Belle (Selby) Curtice, 604 American Bank building, Kansas City, Mo. Housewife.  
 Burton L. Short, Kansas City, Kan. Assistant postmaster.  
 John A. Sloan.

**1883.\***

James W. Berry, Jewell City, Kan. Lumberman and contractor.  
 Mary C. Bower, Manhattan, Kan. Clerk.  
 Lewis W. Call, LL. M., D. C. L., Washington, D. C. Chief clerk, judge-advocate general's office, United States war department.  
 Emma E. Glossop, 503 Antoine street, St. Joseph, Mo. Teacher.  
 William J. Griffing, Manhattan, Kan. Farmer and fruit-grower.  
 Phoebe E. Haines, M. S., Manhattan, Kan. At home.  
 Hortense L. (Houston) Martin, Miami, I. T. Housewife.  
 Jacob Lund, M. S., Manhattan, Kan. Superintendent of heat and power department, Kansas State Agricultural College.  
 Katie I. (Meguire) Sheldon, Riverside, Cal. Housewife.  
 J. Dana Needham, Lane, Kan. Merchant.  
 Milan T. Ward, M. D., Orion, Ill. Physician.  
 Julius T. Willard, M. S., Manhattan, Kan. Professor of chemistry, Kansas State Agricultural College; director Experiment Station.

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\*B. S. has been granted all graduates since 1877.

## 1884.\*

Emmett S. Andress, Lakin, Kan. Farmer.  
 Florence J. Brous, 704 St. Paul street, Kansas City, Kan. Teacher.  
 Bartholomew Buchli, M. S., D. V. S., Alma, Kan. County clerk.  
 John H. Calvin, L. L. B. Died in 1898.  
 William A. Corey, Salt Lake City, Utah. Teacher and editor.  
 Henry M. Cottrell, M. S., Manhattan, Kan. Professor of agriculture, Kansas State Agricultural College.  
 Carrie F. (Donaldson) Brown, Portland, Ore. Housewife.  
 Florence A. Donaldson. Died in August, 1888.  
 Frank W. Dunn, Patagonia, Ariz. Assayer.  
 I. Day Gardiner. Died in 1899.  
 Edwin H. Kern, Cripple Creek, Colo. Mining engineer.  
 Marion M. Lewis. Died in 1895.  
 Charles L. Marlatt, M. S., 1440 Massachusetts avenue, Washington, D. C. First assistant in entomological division, United States department of agriculture.  
 Lincoln H. Neiswender, Silver Lake, Kan. Farmer.  
 Geo. C. Peck, Junction City, Kan. Feed dealer.  
 Hattie L. (Peck) Berry, Jewell City, Kan. Housewife.  
 John W. Shartel, Oklahoma City, Okla. Lawyer.

## 1885.\*

Thomas Bassler, Batchelder, Okla. Horticulturist.  
 Albert Deitz, 2402 Fairmount avenue, Kansas City, Mo. Merchant.  
 George E. Hopper, M. S., Arkansas City, Kan. Contractor.  
 Florence F. Hough, Great Bend, Kan.  
 Frank A. Hutto, Ph. D., Stillwater, Okla. Professor of history and economics, Oklahoma Agricultural and Mechanical College; graduate student Kansas State Agricultural College.  
 J. Allen Lewis, M. S., C. E., 288 South Oakley avenue, Chicago, Ill. Civil engineer.  
 Nellie J. Murphy, South Denver, Colo. Trained nurse.  
 Arthur L. Noyes, Wabaunsee, Kan. Farmer.  
 Clarence D. Pratt, Dallas, Tex. General agent paint company.  
 Rollin R. Rees, Minneapolis, Kan. Attorney and member of legislature.  
 Frederick J. Rogers, M. S., Leland Stanford, Cal. Instructor in physics, Leland Stanford Jr. University.  
 Dorothy E. C. (Secrest) Hungerford, Randolph, Kan. Housewife.  
 Grace Wonsetler, M. D., Chicago, Ill. Physician.  
 Effie E. (Woods) Shartel, Oklahoma City, Okla. Housewife.

## 1886.\*

Lillie B. Bridgman, M. S., corner Sixteenth and Utah streets, San Francisco, Cal. Professor of physics, California School of Mechanic Arts.  
 Louis P. Brous, M. S., Torreon, Mexico. Architect for Schwarzschild & Sulzberger Packing Company.  
 Paul H. Fairchild, M. D., 100 William street, New York city. Publisher of medical journals, and president of Pulvula Chemical Company.  
 Abbott M. Green, Adin, Cal. Civil engineer and teacher.  
 James G. Harbord, M. S. Captain Eleventh U. S. cavalry, division of insular affairs, war department, Philippine Islands.  
 John U. Higinbotham, 205 La Salle street, Chicago, Ill. Cashier National Biscuit Company.  
 Maria C. (Hopper) Getty, Downs, Kan. Housewife.  
 E. Ada (Little) MacEwan, Logan, Utah. Housewife.  
 Frank L. Parker, Hutchinson, Kan. Merchant.  
 Edward H. Perry, Oklahoma City, Okla. Editor and publisher.  
 H. Augustus Platt, Guthrie, Okla.  
 Ada H. (Quinby) Perry, Oklahoma City, Okla. Housewife.  
 Ida H. (Quinby) Gardiner, Santa Barbara, Cal. Housewife.  
 Minnie Reed, M. S., Santa Ana, Cal. Teacher in high school.  
 David G. Robertson, 100 Washington street, Chicago, Ill. Lawyer.  
 Edward O. Sisson, Peoria, Ill. Director Bradley Polytechnic Institute.  
 John W. Van Deventer, Sterling, Colo. Editor and publisher.  
 George W. Waters, Dillon, Colo. Ranchman.

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\* B. S. has been granted all graduates since 1877.

William E. Whaley, 5418 Greenwood avenue, Chicago, Ill. Dean and instructor in history, South Side Academy.  
 F. Henrietta (Willard) Calvin, Manhattan, Kan. Librarian Kansas State Agricultural College.  
 John L. Wise, Smithboro, Ill. Merchant.

**1887.\***

Edgar A. Allen, Wyandotte, Ind. Superintendent of Indian school.  
 Fred H. Avery. Died in 1896.  
 Claude M. Breese, M. S., Manhattan, Kan. County clerk.  
 John B. Brown, M. S., Mount Morris, Minn. Supt. of Morris Training School for Indians.  
 Walter J. G. Burtis, Fredonia, Kan. Farmer.  
 Mark A. Carleton, M. S., Washington, D. C. Cerealists, division of vegetable physiology and pathology, United States department of agriculture.  
 Nellie E. (Cottrell) Stiles, Fullerton, Cal. Housewife.  
 Bert R. Elliott, Dawson City, Alaska. Miner.  
 Frederick B. Elliott, Manhattan, Kan. Real-estate and insurance agent.  
 Clara M. Keyes, Warner, Cal. Teacher.  
 Fred. G. Kimball, St. Michaels, Alaska. Chief postal clerk.  
 Frederick A. Marlatt, Manhattan, Kan. Proprietor Blue Valley Manufacturing Company.  
 William J. McLaughlin, Randolph, Utah. Editor.  
 Mary E. Moses, Manhattan, Kan. At home.  
 Charles A. Murphy, Clay Center, Kan. Teacher of science, Clay county high school.  
 Orlando G. Palmer, L.L. M., Alva, Okla. Professor of history and civics, Northwest Territory Normal School.  
 Louis B. Parker. Died in 1889.  
 James E. Payne, M. S., Fort Collins, Colo. Field agent in charge of plains investigation, Colorado Experiment Station.  
 Seward N. Peck, Topeka, Kan. Cabinet-maker, railroad shops.  
 George N. Thompson, Belmond, Iowa. Mechanic.  
 Willis M. Wright, Jennings, La. Farmer.

**1888.\***

Grant Arnold, Toledo, Wash. Teacher.  
 Bertha H. Bacheller, M. S., Kansas City, Mo. Teacher of domestic science, manual training school.  
 Clement G. Clarke, Plainville, Conn. Minister.  
 Alexander C. Cobb, Wagoner, I. T. Farmer and carpenter.  
 Mattie (Cobb) Clarke, Plainville, Conn. Housewife.  
 Minnie H. Cowell, Steyning, Sussex, England. Trained nurse.  
 Lyman H. Dixon, Buffalo, N. Y. Architect.  
 David G. Fairchild, M. S., Washington, D. C. Agricultural explorer, department of agriculture.  
 Carl E. Friend, Soldier, Kan. Banker.  
 John R. Harrison, Washington, D. C. Post-office inspector.  
 Humphrey W. Jones, 1251 Lincoln street, Topeka, Kan. Teacher of music in city schools.  
 Nathan E. Lewis, 149 East Fifth street, Plainfield, N. Y. Draughtsman.  
 Abbie L. Marlatt, M. S., 261 Benefit street, Providence, R. I. Teacher of domestic science, manual training school.  
 William C. Moore, Parsons, Kan. Editor and publisher.  
 Ernest F. Nichols, Hanover, N. H. Professor of physics, Dartmouth College.  
 Harry E. Robb, Eureka, Kan. Farmer and county surveyor.  
 Anna Snyder, Emporia, Kan. Student State Normal School.  
 Edwin H. Snyder, Kansas City, Kan. Teacher in school for blind.  
 Oliver L. Utter, 72 Mount Vernon street, Boston, Mass. Student in Boston University.  
 Aaron Walters. Died in 1892.  
 Lora L. (Waters) Beeler, M. S., 2469 N. Springfield avenue, Irving Park, Chicago, Ill. Housewife.  
 Daniel W. Working, jr., box 432, Denver, Colo. Farmer.

**1889.\***

Emma A. Allen. Died in 1891.  
 Joseph W. Bayles, Onaga, Kan. Minister.  
 Walter R. Browning, Padonia, Kan. Grain dealer.  
 David E. Bundy, Braman, Okla. Minister.  
 Samuel S. Cobb, Wagoner, I. T. Cattle dealer.  
 Judson S. Criswell, Manhattan, Kan. Sales clerk.

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\*B. S. has been granted all graduates since 1877.

Mattie I. (Farley) Carr, Winthrop, Wash. Housewife.  
 Clarence E. Freeman, M. S., Chicago, Ill. Associate professor of electrical engineering, Armour Institute of Technology.  
 Hattie L. (Gale) Sanders, Mangona, Fla. Housewife.  
 John S. Hazen, Springfield, Mo. United States weather bureau observer.  
 Albert B. Kimball, Scandia, Kan. Editor and postmaster.  
 William Knabb, Hiawatha, Kan. Assistant bank cashier.  
 Mary C. Lee, Manhattan, Kan. At home.  
 Alonzo A. Mills, Fullerton, Cal.  
 Susan W. Nichols, 637 North Tenth street, St. Joseph, Mo. Music teacher.  
 Walter H. Olin, M. S., Ottawa, Kan. Graduate student Kansas State Agricultural College.  
 Eli M. Paddleford, Birmingham, Kan. Minister.  
 Maude F. (Sayers) DeLand, 4610 Forbes street, Pittsburgh, Pa. Housewife.  
 Florine (Secrest) Linderman, Willow Glen, San Jose, Cal. Housewife.  
 Stanley Snyder, Oskaloosa, Kan. Farmer.  
 Charles W. Thompson, Holton, Kan. Dentist.  
 Jane C. Tunnell, Joliet, Ill. Instructor in pedagogy.  
 Ina M. (Turner) Bruce, St. Louis, Mo. Housewife.  
 Robert U. Waldraven, Rosedale, Kan. Minister.  
 Henry S. Willard, M. D., Manhattan, Kan. Physician and druggist.

**1890.\***

Samuel I. Borton, Rocky Ford, Colo. Farm superintendent, American Beet Sugar Company.  
 Frank A. Campbell, Highlands, Colo. Reporter.  
 Arthur F. Cranston, Parsons, Kan. Lawyer.  
 John Davis, Alva, Okla. Professor of English and literature, Oklahoma Normal School.  
 Grant W. Dewey, Manhattan, Kan. Photographer.  
 Charles J. Dobbs, 1217 Benny Way, Seattle, Wash. Lawyer.  
 Charles W. Earle, 917 E street, Denver, Colo. Advertising agent.  
 Schuyler C. Harner, Keats, Kan. Teacher and farmer.  
 John W. Ijams, Orlando, Okla. Teacher.  
 Bertha S. (Kimball) Dickens, M. S., Manhattan, Kan. Housewife.  
 Harriet E. (Knipe) Curtis, Council Grove, Kan. Housewife.  
 Nellie P. (Little) Dobbs, 1217 Benny Way, Seattle, Wash. Housewife.  
 Ellsworth Thomas Martin, L.L. B., Chicago, Ill. Lawyer.  
 Silas C. Mason, M. S., Berea, Ky. Professor of horticulture and biology, Berea College.  
 Wilton L. Morse, Mancos, Colo. Farmer.  
 Albert E. Newman, Watonga, Okla. County superintendent and editor.  
 Julia R. Pearce, Washington, D. C. Assistant in bureau of soils, United States department of agriculture.  
 Emil C. Pfuetze, Manhattan, Kan. Lumber dealer.  
 William H. Sanders, Mangona, Fla. Plumber and builder.  
 Emma Secrest, A. M. Died in 1888.  
 Marie Barbara Senn, M. S., Fargo, N. Dak. Instructor in domestic economy, North Dakota Agricultural College.  
 Ralph Snyder, Oskaloosa, Kan. Farmer and stockman.  
 George E. Stoker, A. B., Topeka, Kan. Lawyer.  
 Walter T. Swingle, M. S. Traveling in Africa for division of vegetable pathology, United States department of agriculture.  
 Gilbert J. Van Zile. Died in 1899.  
 Harry N. Whitford, M. S., Chicago, Ill. Assistant in botany, University of Chicago.  
 Thomas E. Wimer. Died in 1890.

**1891.\***

William Aaron Anderson, 1700 Walnut street, Kansas City, Mo. Bookkeeper Culver Lumber Company.  
 William Sherman Arbuthnot, D. V. S., Republic, Kan. Veterinary surgeon and druggist.  
 Herman William Avery, Wakefield, Kan. Farmer and merchant.  
 Judd Noble Bridgman, M. S., Leavenworth, Kan. Engineer.  
 Robert James Brock, Manhattan, Kan. Lawyer and county attorney.  
 Francis Charles Burtis, M. S., Stillwater, Okla. Professor of agriculture and horticulture, Oklahoma Agricultural and Mechanical College.  
 Charles Albert Campbell, 1947 North Seventh street, Philadelphia, Pa. Minister.  
 Spencer Norman Chaffee, Kansas City, Mo. Student medical college.

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\* B. S. has been granted all graduates since 1877.

Clay Ephraim Coburn, 422 North Fourth street, Kansas City, Kan. Physician.  
 Gertrude Coburn, Kansas City, Kan. At home.  
 Tina Louise (Coburn) Tomson, Cedar Rapids, Iowa. Housewife.  
 Rachel Callie (Conwell) Thoburn, Manhattan, Kan. Teacher.  
 Christine Mossman Corlett, Guthrie, Okla. Teacher.  
 Mary Emmeline (Cottrell) Payne, M. S., Fort Collins, Colo. Housewife.  
 Phil Sheridan Creager, Kansas City, Mo. Telegraph editor, *Kansas City Journal*.  
 Kary Cadmus Davis, Morgantown, W. Va. Professor of botany and horticulture, West Virginia University.  
 Thomas Clarke Davis, Benedict, Kan. Farmer.  
 Helen Pearl (Dow) Peck, 112 Marlborough road, Brooklyn, N. Y. Housewife.  
 Anna (Fairchild) White, Brooklyn, N. Y. Housewife.  
 Harry Benson Gilstrap, Chandler, Okla. Editor, publisher, and postmaster.  
 Almon Arthur Gist, Fort Riley, Kan. Telegraph operator and station agent.  
 Amy Myrtle (Harrington) Deibler, Leadville, Colo. Housewife.  
 Delpha May (Hoop) Montgomery, Tampa, Kan. Housewife.  
 Mayme Amelia (Houghton) Brock, Manhattan, Kan. Housewife.  
 Willis Wesley Hutto, Manhattan, Kan. Painter and paper-hanger.  
 George Victor Johnson, Sedan, Kan. Editor.  
 Frank Mullett Linscott, D. V. S., Farmington, Kan. Stock-raiser.  
 Bessie Belle Little, Philadelphia, Pa. Teacher of physical culture, Bryn Mawr College.  
 Albert Edward Martin, Streator, Ill. Manager telephone company.  
 Nellie Evangeline (McDonald) Thayer. Died in 1902.  
 David Collins McDowell, Elkton, Colo. Merchant.  
 Alfred Midgley, Minneapolis, Kan. Clerk.  
 Madeleine Wade Milner, 6514 Kimbark avenue, Chicago, Ill. Assistant librarian, Armour Institute.  
 Paul Chambers Milner, 6514 Kimbark avenue, Chicago, Ill. Assistant exchange teller, Illinois Trust and Savings Bank.  
 Harry Elbridge Moore, Kingfisher, Okla. Implement dealer.  
 John Otis Morse, Mound City, Kan. Lawyer and clerk of district court.  
 Hattie May Noyes, Manhattan, Kan. Teacher and graduate student, Kansas State Agricultural College.  
 Louise (Reed) Paddleford, Birmingham, Kan. Housewife.  
 Artemus Jackson Rudy, Fresno, Cal. Fruit-raiser.  
 Henry Vernon Rudy, Fresno, Cal. Fruit-raiser.  
 Charlotte Jane (Short) Houser, M. S., [B. S. Dickinson College, Carlisle, Pa.,] Danville, Pa. Housewife.  
 Ben Skinner, M. D., Granada, Kan. Physician.  
 Caroline Scott (Stingley) Van Blarcom. Died in 1899.  
 Lillian Alice (St. John) Williams, 841 Osage avenue, Kansas City, Kan. Housewife.  
 Ellis Cheney Thayer, Manhattan, Kan. Farmer.  
 Sam L. Van Blarcom, M. D., 817 Garfield avenue, Kansas City, Kan. Railway postal clerk.  
 Frank Albert Waugh, M. S., Burlington, Vt. Professor of horticulture in Vermont University.  
 Fannie Elizabeth (Waugh) Davis, M. S., Morgantown, W. Va. Housewife.  
 Flora Emilie Wiest, Manhattan, Kan. Teacher.  
 Bertha (Winchip) Spilman, 515 Second street, S. E., Washington, D. C. Housewife.  
 Alfred Orin Wright, Jennings, La. Farmer.  
 Effie Jeanetta Zimmerman, M. S., Moray, Kan. Journalist.

## 1892.

Grace Maria Clark, M. S., Disputanta, Ky. Farmer.  
 George L. Clothier, M. S., New Haven, Conn. Student of forestry, Yale University.  
 Lillian Clyde Criner, McPherson, Kan. Editor.  
 Harry Darnell, Kelso, Wash. Principal of schools.  
 William H. Edelblute, Harrison, Idaho.  
 Elizabeth (Edwards) Hartley, Manhattan, Kan. Housewife.  
 John Frost, Schroyer, Kan. Farmer.  
 Effie (Gilstrap) Frazier, Chandler, Okla. Housewife.  
 Ava (Hamill) Tillotson, M. S., Hill City, Kan. Housewife.  
 J N Harner. Died in 1897.  
 Loyall S. Harner, 1122 Lincoln street, Colorado Springs, Colo. Clerk.

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\*B. S. has been granted all graduates since 1877.

Charles Pinckney Hartley, M. S., Washington, D. C. Division of vegetable physiology and pathology, United States department of agriculture.  
 John William Abraham Hartley, Manhattan, Kan. Farmer and teacher.  
 James Laird McDowell, Elkton, Colo. Assayer.  
 Robert A. McIlvaine, Durham, Kan. Principal of schools.  
 Kate (Oldham) Sisson, Columbus, Ohio. Housewife.  
 Daniel Henry Otis, M. S., Manhattan, Kan. Professor of dairying, Kansas State Agricultural College.  
 Ivan Bryan Parker, M. D., Hill City, Kan. Physician, and president Graham County State Bank.  
 Warner S. Pope. Died in 1899.  
 Burton Homer Pugh, Topeka, Kan. Merchant.  
 Elias W. Reed, Ann Arbor, Mich. Medical student.  
 Robert Stirling Reed, Emporia, Kan. Student State Normal School.  
 Arthur Daniel Rice, Rossville, Kan. Minister.  
 Fred C. Sears, M. S., Wolfville, Nova Scotia. Director of provincial school of horticulture.  
 Birdie E. Secrest, Randolph, Kan. Clerk.  
 May Secrest, 1230 Amsterdam avenue, New York city. Student Columbia University.  
 Ruth Tipton (Stokes) Sears, M. S., Wolfville, Nova Scotia. Housewife.  
 Harry W. Stone, Portland, Ore. General secretary Y. M. C. A.  
 Walter Percival Tucker, Avino, Est. de Durango, *via* Eagle Pass, Mexico. Accountant for mining company.  
 Mary Alice (Vail) Waugh, Burlington, Vt. Housewife.  
 Robert Lynn Wallis. Died in 1895.  
 Ora Rebecca (Wells) Traxler, Irving, Kan. Housewife.  
 Daniel F. Wickman, P. O. box 107, Topeka, Kan. Farmer.  
 George Washington Wildin. Mechanical engineer.  
 Charles Ernest Yeoman. Died in 1902.

**1893.\***

Edmund Clarence Abbott, Red River, N. M. Lawyer.  
 Edwin McMaster Stanton Curtis, Houston, Tex. Clerk in Missouri Pacific railroad office.  
 Corinne Louise (Daly) Burtis, Stillwater, Okla. Housewife.  
 Laura Greeley Day, Wichita, Kan. Special lecturer on domestic economy, Purdue University.  
 Ione (Dewey) Sutherland. With King Dodo Opera Company.  
 Albert Dickens, Manhattan, Kan. Acting professor of horticulture, Kansas State Agricultural College.  
 Mary Maud Gardiner, M. S., Stillwater, Okla. Professor of domestic science, Oklahoma Agricultural and Mechanical College.  
 Susie (Hall) Linscott, Farmington, Kan. Housewife.  
 Mary Francis Burgoyne Harman, Kansas City, Kan. Teacher of art, Kansas City high school.  
 Ivy Francis Harner, M. S., Ruston, La. Professor of domestic science, Louisiana Industrial Institute.  
 Margaretha Elise Horn, Dr. O., 335 Hubbard avenue, Detroit, Mich. Teacher of sciences, Detroit high school.  
 Marcia Ione Hulett, Akron, Ohio. Osteopathist.  
 Mac F. Hulett, 120 East Gay street, Columbus, Ohio. Osteopathist.  
 Fred Hulse, Manhattan, Kan. Carpenter.  
 Charles Augustus Kimball, Courtland, Kan. Editor and lawyer.  
 Maud Ethel Knickerbocker, Terraville, S. Dak. Teacher.  
 Thomas Eddy Lyon, Springfield, Ill. Lawyer.  
 William Otis Lyon, 103 Seaton street, N. W., Washington, D. C. Clerk.  
 McLeod Wilson McCrea, Winchester, Kan. Farmer.  
 Rose Edith McDowell, Elkton, Colo. At home.  
 George Lane Melton, Chicago, Ill. Student University of Chicago.  
 Eusebia DeLong (Mudge) Thompson, Marysville, Kan. Housewife.  
 Nora (Newell) Hatch, Manhattan, Kan. Housewife.  
 August Fred. Niemoller, Stitt, Kan. Teacher.  
 Susie Amanda Noyes. Died in 1894.  
 Henry Leamer Pellett, 1524 Chestnut street, Philadelphia, Pa. Physician.  
 Charles John Peterson, Topeka, Kan.  
 Carl Frederic Pfuete, Manhattan, Kan. Lumber dealer.  
 John Dewitt Riddell, M. D., Enterprise, Kan. Physician.

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\*B. S. has been granted all graduates since 1877.

John Albert Rokes, Holton, Kan. Lawyer.  
 Agnes (Romick) Edgar, Salubra, Idaho. Housewife.  
 Fred. Raymond Smith, Manhattan, Kan. Lawyer and court stenographer.  
 George Wildman Smith, M. D., 1328 North Fortieth street, Omaha, Neb. Physician.  
 William Elmer Smith, 501, 502 and 503 Massachusetts building, Kansas City, Mo. Lawyer.  
 John Eugene Thackrey, 2332 Holly street, Kansas City, Mo. Minister.  
 Joseph B. Thoburn, Oklahoma City, Okla. Editor.  
 Charles Henry Thompson, Santa Cruz, Cal. Poultry farmer.  
 George K. Thompson, Marysville, Kan. County superintendent.  
 William James Yeoman, Mankato, Kan. Merchant.

**1894.\***

Frank Weber Ames, New York, N. Y. Clerk National Steel Company.  
 Clara Francelia Castle, M. S., Manhattan, Kan. At home.  
 George Luther Christensen, Houghton, Mich. Instructor in mechanical engineering, Michigan School of Mines.  
 John Cornelius Christensen, Manhattan, Kan. Assistant county treasurer.  
 Lorena Estella Clemons, Manhattan, Kan. Secretary Kansas State Agricultural College.  
 Martha Cottrell, Wabaunsee, Kan. At home.  
 Sarah Esther (Cottrell) Wright, Jennings, La. Housewife.  
 Alverta May Cress, Riley, Kan. At home.  
 Fannie Jane Cress, 71 Walton place, Chicago, Ill. Artist.  
 Ernest A. Donaven, M. D., Mounthope, Kan. Physician.  
 Jephthah W. Evans, M. D., Blue Rapids, Kan. Physician.  
 Isabelle Russell (Frisbie) Criswell, Manhattan, Kan. Housewife.  
 Eugene Leonard Frowe. Died in 1898.  
 Walter Harling, Montone, Cal. Assistant in Montone Sanitarium.  
 Lorena Marguerite Helder, Manhattan, Kan. At home.  
 Mark V. Hester, Lawrence, Kan. Student University of Kansas.  
 Charles Ross Hutchings, Argentine, Kan. Civil and sanitary engineer.  
 Isaac Jones, jr., Etiwanda, Cal. Fruit-grower.  
 Stella Victoria Kimball, Manhattan, Kan. Teacher in city schools.  
 Mary Eliza (Lyman) Otis, M. S., Manhattan, Kan. Housewife.  
 William Henry Moore, Manhattan, Kan. Florist and horticulturist.  
 Sarah (Moore) Foster, 314 Melrose ave. N., Seattle, Wash. Housewife.  
 James Francis Odle, Manhattan, Kan. Farmer.  
 Charles Randolph Pearson, Hoxie, Kan. Teacher.  
 Horace Greeley Pope, 413 and 414 Massachusetts building, Kansas City, Mo. Lawyer.  
 Minnie Louisa Romick, 567 North Gordon street, Pomona, Cal. Teacher.  
 Winnie Luella (Romick) Chandler, Argentine, Kan. Housewife.  
 Victor Irvin Sandt, Wells, Minn. Principal of manual training.  
 John Alfred Scheel, —, N. Dak. Farmer.  
 Jacob Ulrich Secrest, Randolph, Kan. Farmer.  
 Charles Chrisfield Smith, Manhattan, Kan. Editor.  
 Jennie Ruth (Smith) Strong, Kinsley, Kan. Housewife.  
 Wesley Ohio Staver, —, California. Lawyer.  
 John Stingley, station "A," Kansas City, Mo. Traveling salesman.  
 John Edwin Taylor. Died in 1896.  
 Delbert L. Timbers, Osborne, Kan. Teacher.  
 Phebe Carey Turner, Wabaunsee, Kan. Teacher.  
 Samuel Robert Vincent, Orie, Okla. Teacher.  
 Lucy Helena Waters, A. M., Livermore, Cal. Teacher in high school.

**1895.**

Edward Jones Abell, Leonardville, Kan. Farmer and teacher.  
 Carl D. Adams, 515 Miami avenue, Kansas City, Mo. Swift Packing Company.  
 Robert John Barnett, Manhattan, Kan. Assistant postmaster.  
 Burton Wesley Conrad, Sabetha, Kan. Liveryman.  
 Florence Ruth Corbett, Brooklyn, N. Y. Supervisor of domestic science, Kings county hospital.  
 Sid Henry Creager, Kansas City, Mo. Railway postal clerk.  
 Elsie Emeline Crump, Manhattan, Kan. Teacher city schools.  
 David Thomas Davies, Riley, Kan. Farmer.  
 Frank Andrew Dawley, Waldo, Kan. Farmer and stock-raiser.

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Daisy Day, M. S., Onaga, Kan. At home.  
 Flora (Day) Barnett, M. S., Manhattan, Kan. Housewife.  
 George Adam Dean, Manhattan, Kan. Assistant in entomology and graduate student, Kansas State Agricultural College.  
 Lillie Christena Dial, Cleburne, Kan. Teacher.  
 Lucy Ellis, Westmoreland, Kan. Teacher.  
 Victor Emrick, 998 East Taylor street, Portland, Ore. Passenger auditing clerk, Oregon Transportation and Navigation Company.  
 George Forsyth, Franklin, Ind. Sales agent.  
 Ernest Harrison Freeman, Chicago, Ill. Student Armour Institute.  
 Florence Eleanor (Fryhofer) Webster, Manhattan, Kan. Housewife.  
 George William Fryhofer, Colorado Springs, Colo. Lawyer.  
 Oscar Hugo Halstead, 218 South Sixth street, St. Joseph, Mo. Instructor in mathematics, Platt's Commercial College.  
 Hortensia (Harman) Patten, 7106 Lafayette avenue, Chicago, Ill. Housewife.  
 John Bright Harman, Valley Falls, Kan. Farmer.  
 Clarence V. Holsinger, Rosedale, Kan. Fruit-raiser.  
 Christian Andrick Johnson, Success, Kan. Farmer.  
 John James Johnson, 4478 Delmar avenue, St. Louis, Mo. Professor of physiology and director of physiologic laboratory, Barnes Medical College.  
 Fred. Ralph Jolly, Olathe, Kan. Newspaper reporter.  
 William Irving Joss, Kirksville, Mo. Student of osteopathy.  
 Maud Estella (Kennett) Darnell, Kelso, Wash. Housewife.  
 Myron Arthur Limbocker, Quenemo, Kan. Cashier in bank.  
 Samuel Alexander McDowell, Elkton, Colo. Clerk.  
 Laura Sarah (McKeen) Smith, Russell, Kan. Housewife.  
 Theo. Wattles Morse, M. S., Kansas City, Mo. Soliciting editor for *Live-stock Indicator*.  
 Oscar Albert Otten, Pierce Junction, Kan. Telegraph operator.  
 William Hackworth Painter. Died in 1901.  
 Charles Wesley Pape, M. S., Topeka, Kan. Box 190.  
 Ethel (Patten) Ames, New York city. Housewife.  
 John Vernon Patten, 7106 Lafayette avenue, Chicago, Ill. Manufacturer.  
 William H. Phipps, St. Joseph, Mo. Blue Valley Creamery Company.  
 Alice Julia (Quintard) Peck. Died in 1899.  
 Frederick Ellsworth Rader, Sitka, Alaska. Alaskan Experiment Station.  
 Ralph Waldo Rader, Fayetteville, Ark.  
 Ada Rice, Manhattan, Kan. Assistant in preparatory department, Kansas State Agricultural College.  
 Benjamin Franklin Simeon Royer, St. Joseph, Mo. Physician.  
 Charles Baxter Selby, Marion, Va. Lawyer.  
 Mabel Gertrude Selby, Argentine, Kan. Teacher.  
 Ernest P. Smith, Manhattan, Kan. Carpenter.  
 Frederick John Smith, Russell, Kan. Editor.  
 Kitty Myrtle (Smith) Wheeler, Manhattan, Kan. Housewife.  
 Marietta Smith, Denver, Colo. Student of nursing, homeopathic hospital.  
 William Henry Steuart, Winchester, Kan. Farmer.  
 Cora Idella (Stump) Chaffee, Lasita, Kan. Housewife.  
 Dora (Thompson) Winter, Omaha, Neb. Housewife.  
 Elvin Creveling Trembly, Comiskey, Kan. Farmer.  
 George Carpenter Wheeler, Manhattan, Kan. Herdsman for dairy husbandry department and graduate student, Kansas State Agricultural College.  
 Mary Elizabeth (Willard) Emrick, 998 East Taylor street, Portland, Ore. Housewife.  
 Olive Mabel (Wilson) Holsinger, Rosedale, Kan. Housewife.  
 Ora Gertrude Yenawine, Randall's Island, New York, N. Y. Instructor in sewing, New York House of Refuge.

## 1896.\*

May Haines Bowen, Manhattan, Kan. Instructor in mathematics, Kansas State Agricultural College.  
 Con Morrison Buck, M. S., Fort Madison, Iowa. Civil engineer on Santa Fe railroad.  
 Margaret Isaphene (Carlton) Doane, College Park, Md. Housewife.  
 William Annesley Cavanaugh, Fort Sheridan, Ill. Lieutenant company D, Twentieth infantry.  
 William Arthur Coe, Coloma, Kan. Farmer.

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\*B. S. has been granted all graduates since 1877.

Charlotte Mabel (Cotton) Smith, Wabaunsee, Kan. Housewife.  
 Ernest Brown Coulson, Sweetwater, Tex.  
 George Henry Dial, Cleburne, Kan. Teacher and farmer.  
 Charles Francis Doane, M. S., College Park, Md. Assistant in dairying and bacteriology, Maryland Agricultural College.  
 John Berthold Dorman, Albany, N. Y. Student Albany Normal College.  
 Bradford Dougherty, Kansas City, Kan. Merchant.  
 Charles Silas Evans, Manila, P. I. Hospital corps.  
 Robert Kilby Farrar, Axtell, Kan. Teacher.  
 George William Finley, Emporia, Kan. Student Kansas State Normal School.  
 Joanna Freeman. Died in 1897.  
 John Jacob Fryhofer, Joplin, Mo. Secretary of mining corporation.  
 Elmer George Gibson, Stockdale, Kan. Farmer.  
 George Clifton Hall, Morganville, Kan. Editor.  
 Alonzo Charles Havens, Dwight, Kan. Farmer.  
 Gertrude Julia (Havens) Norton, College Park, Md. Housewife.  
 Lawrence Wilbur Hayes, 1028 Kansas avenue, North Topeka, Kan. Commission merchant.  
 John Warren Holland, Manila, P. I. Assistant cashier, United States custom-house.  
 Henry George Johnson, 358 Marsfield street, Chicago, Ill. Student in dentistry.  
 Susan Effie (Johnson) Cooper, Success, Kan. Housewife.  
 Marian Elizabeth Jones, M. S., Manhattan, Kan. Assistant in domestic art department, Kansas State Agricultural College.  
 Thomas Lormar Jones, 1000 Walnut street, Kansas City, Mo. Piano-tuner.  
 Edward Clarence Joss, D. V. S., Fairview, Kan. Veterinarian.  
 Royal S. Kellogg, M. S., Washington, D. C. Bureau of forestry, United States department of agriculture.  
 Mark Kirkpatrick, McAlester, O. T. United States land surveyor.  
 Edith Lynette Lantz, Salida, Colo., box 95. Teacher.  
 Sue Long, Topeka, Kan. Newspaper reporter.  
 Charles W. Lyman, Salina, Kan. Commercial traveler.  
 Charles Dwin McCauley, 417 Madison street, Topeka, Kan. Draughtsman.  
 Charles Sumner Marty, Sun, Kan. Ranchman.  
 Elda Lenore (Keen) Moore, Manhattan, Kan. Housewife.  
 Arthur Houston Morgan, Hillside, Kan. Farmer.  
 Clara Verena Newell, Shubert, Neb. Teacher.  
 Ellen Elizabeth (Norton) Adams, Manhattan, Kan. Housewife.  
 John Bitting Smith Norton, College Park, Md. Professor of botany, Maryland Agricultural College.  
 Hattie A. (Paddleford) McFadden, Walsburg, Kan. Housewife.  
 Mary Kerilla (Painter) Rogers, Ashland, Kan. Housewife.  
 Elva Luthera (Palmer) Thackrey, 2832 Holly street, Kansas City, Mo. Housewife.  
 Inez Luella (Palmer) Barrows, Clifton, Kan. Housewife.  
 Fannie (Parkinson) Moyer, Ottawa, Kan. Housewife.  
 Archie Carpenter Peck, Francis, I. T. Manager of mill and cotton-gin.  
 Arthur Lewis Peter, M. D., 2109 West Thirty-fourth avenue, Denver, Colo. Physician.  
 Charles Edwin Pincomb, Lenexa, Kan. Stockman.  
 Mary Josephine Pincomb, Salt Lake City, Utah. Director of domestic science and art, University of Utah.  
 John Poole, E. F. D. No. 2, Manhattan, Kan. Farmer.  
 Edgar Arthur Powell, Osage City, Kan. Farmer and stock-raiser.  
 Lisle Willits Pursel, Kansas City, Mo. Clerk.  
 Howard Newton Rhodes, Topeka, Kan. Traveling salesman for Jas. Kirk, Chicago.  
 Ambrose Elliott Ridenour, Manhattan, Kan. Foreman of foundry, Kansas State Agricultural College.  
 Mary Etta (Ridenour) Plowman, Jewell City, Kan. Housewife.  
 Isaac Archie Robertson, Lexington, Mo. Clerk and bookkeeper for Missouri Pacific railway.  
 Grace Anna Secrest, Akron, Ohio. Instructor in sewing, city schools.  
 Carl Snyder, Oskaloosa, Kan. Farmer.  
 Max Gilbert Spalding, Eureka, Kan. Teacher and farmer.  
 Orville Ashford Stingley, 1328 McGee street, Kansas City, Mo. Meat inspector, Armour's.  
 Sadie Stingley, Manhattan, Kan. At home.  
 Gertrude Ella Stump, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Miriam Esther Swingle, 116 High street, Peoria, Ill. Assistant in household economy, Bradley Polytechnic Institute.

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\*B. S. has been granted all graduates since 1877.

William Elwood Thackrey, Geneva, Neb. Manual training teacher, Indian service.  
 James Dunbar Trumbull, Manhattan, Kan. Clerk.  
 Frank Edwin Uhl, Gardner, Kan. Farmer, and graduate student Kansas State Agricultural College.  
 Edwin H. Webster, Manhattan, Kan. Assistant professor of dairying, Kansas State Agricultural College.

## 1897.\*

Cora Atwell, R. F. D. No. 3, North Topeka, Kan. Teacher.  
 Roger William Bishoff, Eudora, Kan. Farmer.  
 Mary Frances Carnell, Denver, Colo. Milliner.  
 William Burns Chase, Hoyt, Kan. Hardware merchant.  
 Frank E. Cheadle, Erwin, Okla. Painter.  
 Robert Waitman Clothier, M. S., Cape Girardeau, Mo. Professor of chemistry and agriculture, Third District Normal School.  
 Maggie A. (Correll) Uhl, Gardner, Kan. Housewife.  
 Mabel Crump, 1233 Washington street, Kansas City, Mo. Stenographer.  
 Fred Volley Dial, Cleburne, Kan. Clerk.  
 Viola Grace Dille, Ottawa, Kan. Bookkeeper.  
 Samuel Dolby, 110 Virtner avenue, Lexington, Ky.  
 George Doll, Larned, Kan. Teacher and farmer.  
 Anna Phillipina (Engel) Blackman, Manhattan, Kan. Housewife.  
 Emma Finley, Manhattan, Kan. Teacher city schools.  
 Martha Fox, Topeka, Kan. Student of nursing, Christ's hospital.  
 Philip Fox, M. S., Hanover, N. H. Student Dartmouth College.  
 Ned Merrill Green, Fort Crook, Neb. Second lieutenant, Twenty-fifth infantry, United States army.  
 Mary Eliza Haulenbeck. Died in 1901.  
 Lewellyn Gaines Hepworth, Scranton, Kan. Insurance.  
 Ina Emma Holroyd, Manhattan, Kan. Assistant and graduate student, Kansas State Agricultural College.  
 Myrtle Hattie (Hood) Johnson, Success, Kan. Housewife.  
 Charles Henry Hoop, Manhattan, Kan. Mechanic.  
 Winifred Anna (Houghton) Buck, Fort Madison, Iowa. Housewife.  
 Bret Redmon Hull, Alta Vista, Kan. Lumber dealer.  
 Clay Berkey Ingman, Barnes, Kan. Farmer.  
 Gertrude May (Lyman) Hall, 2312 Thirteenth street, N. W., Washington, D. C. Housewife.  
 Frederick Hugo Meyer, Mount Vernon, S. Dak. Creamery company.  
 Valentine Maelzer, Morse, Idaho. Farmer and teacher.  
 Sherman Bodwell Newell, Zeandale, Kan. Teacher and farmer.  
 Oliver Ezra Noble, Hobart, Okla. Government surveyor.  
 Jesse Baker Norton, M. S., Washington, D. C. Scientific aid, bureau of plant industry, department of agriculture.  
 Mary Augusta Norton, St. Louis, Mo. Indexer in library, Shaw's Botanical Garden.  
 Bertha Olivia Olson, Manhattan, Kan. At home.  
 Hilda Sophia Olson, Manhattan, Kan. Teacher.  
 Russell John Peck, McFarland, Kan. Teacher.  
 William Oscar Peterson, Randolph, Kan. Farmer.  
 Eva Louise Philbrook, Logan, Kan. Teacher.  
 Rufus M. Philbrook, Woods, N. Dak. Teacher.  
 William Joseph Rhoades, Shockey, Kan. Ranchman and teacher.  
 Carl Rice, Ilagan, North Luzon. Government employee.  
 Thomas Meade Robertson, Coffeyville, Kan. Dentist.  
 Homer Joseph Robison, Topeka, Kan. Machinist.  
 Edward Shellenbaum, Randolph, Kan. Clerk in post-office.  
 Alice Myrtle Shofe, Manhattan, Kan. At home.  
 Charles Wesley Shull, Manhattan, Kan. Farmer.  
 Alfred Caleb Smith, 7503 Sunnyside avenue, Green Lake addition, Seattle, Wash. Electrical engineer.  
 Phoebe Jane Smith, Pueblo, Colo. Teacher city schools.  
 Wilhelmina Henrietta Spohr, Manhattan, Kan. Teacher city schools.  
 Charles Harrison Stokely, Burlingame, Ark.  
 John E. Trembly, Comiskey, Kan. Farmer.  
 Harriet Agnes Vandivert, Wichita, Kan. Teacher of domestic science, Fairmount College.

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John Minton Westgate, M. S., 6023 Ellis avenue, Chicago, Ill. Student University of Chicago.  
 Mark Wheeler, Fort Clark, Tex. First lieutenant, Fourth United States infantry.  
 Clare Annie (Wilson) Dutton, Mapleton, Kan. Housewife.

## 1898.\*

Emory Sherwood Adams, Manila, P. I. Corporal company G, Second United States infantry.  
 Joshua William Adams, Cheyenne Wells, Colo. Rain Belt Experiment Station.  
 Samuel John Adams, Manhattan, Kan. General secretary of Kansas State Agricultural College  
 Y. M. C. A.  
 Thomas Walter Allison, Florence, Kan. Farmer and fruit-grower.  
 William Anderson, Manhattan, Kan. Assistant in mathematics, Kansas State Agricultural  
 College.  
 Olive Voiles, Forty-ninth street and Fourth avenue, New York city. Nurse, woman's hospital.  
 Jessie Geneva Bayless, Yates Center, Kan. At home.  
 Hope Brady, Manhattan, Kan. Teacher, city schools.  
 Robert Henry Brown, Manhattan, Kan. Assistant in music, Kansas State Agricultural College.  
 Earl Carver Butterfield, Washington, D. C. Bureau of forestry, United States department of  
 agriculture.  
 John Alfred Conover, Kearney, Neb. Dairy farmer.  
 Minnie Laura Copeland, 356 Hermitage, avenue, Chicago, Ill. Trained nurse.  
 Lucy Maria (Cottrell) Pottorf, Riley, Kan. Housewife.  
 Anna Magdalena Dahl, Webber, Kan. Teacher.  
 Inga Josephine Dahl, Webber, Kan. At home.  
 Cassie Belle Dille, Kansas City, Kan. Stenographer.  
 Emma Phillipine Doll, Burdett, Kan. Teacher.  
 Cora Elizabeth (Ewalt) Brown, Manhattan, Kan. Housewife.  
 Guy Francis Farley, Melvern, Kan. Grain merchant.  
 Mary (Finley) Ridenour, Manhattan, Kan. Housewife.  
 Arthur Lorenzo Frowe, Wamego, Kan. Teacher.  
 William Logan Hall, M. S., 2812 Thirteenth street, N. W., Washington, D. C. Assistant in bureau  
 of forestry, United States department of agriculture.  
 Anna Viola (Hanson) Higinbotham, Manhattan, Kan. Housewife.  
 Walter Eugene Hardy, 508 Century building, Kansas City, Mo. Traveling representative Cen-  
 tral Lyceum Bureau.  
 James Madison Harvey, Junction City, Kan. Farmer.  
 Emmett Vivian Hoffman, Enterprise, Kan. Bookkeeper.  
 Guy Dudley Hulett, Kirksville, Mo. Student of osteopathy.  
 Bertha Emma Ingman, Barnes, Kan. At home.  
 Ary Cordelia Johnson, 4478 Delmar avenue, St. Louis, Mo. Stenographer.  
 Charles Percy King, Eldorado Springs, Mo. Lumberman.  
 Bessie May (Locke) Noble, Hobart, Okla. Housewife.  
 Olive Long. Died in 1902.  
 William Andrew McCullough, M. D., Linwood, Kan. Physician and proprietor of drug-store.  
 Inez Isadore (Manchester) Allison, Florence, Kan. Housewife.  
 Florence Adelia Martin. Died in 1901.  
 Henry Alba Martin, Admire, Kan. Creamery.  
 Alice Maude Melton, Manhattan, Kan. Clerk in director's office, Experiment Station.  
 George Gerkein Menke, Seattle, Wash.  
 Mary Frances Minis, Manhattan, Kan. Clerk county treasurer's office.  
 May Moore, Manhattan, Kan. Bookkeeper.  
 Harriet Grace Nichols, Liberal, Kan. At home.  
 Schuyler Nichols, M. D., Liberal, Kan. Physician.  
 Lucy Junie Parks, Manhattan, Kan. Teacher.  
 Ernest Byron Patten, Carthage, S. Dak. Miller and grain-dealer.  
 C. Jeanette Perry, Manhattan, Kan. Clerk in secretary's office and graduate student, Kansas  
 State Agricultural College.  
 Emilie Matilda Pfuetze, Manhattan, Kan. Cashier in store.  
 John Martin Pierce, Alexander Valley, Cal. Fruit-grower.  
 Raymond Haines Pond, M. S., 410 East Liberty street, Ann Arbor, Mich. Student of botany,  
 University of Michigan.  
 William Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.  
 Willis Thomas Pope, Doylestown, Pa. Horticulturist National Farm School.

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Nora May (Reed) Pierce, Alexander Valley, Cal. Housewife.  
 Gertrude Elizabeth Rhodes, Manhattan, Kan. Teacher.  
 Henry William Rogler, Matfield Green, Kan. Farmer.  
 Ferdinand John Rumold, Dillon, Kan. Farmer.  
 Martin Wilbur Sanderson, Marysville, Kan. County surveyor.  
 Olive Maria Shelden, Manhattan, Kan. At home.  
 Edwin Lee Smith, Manhattan, Kan. Teacher and farmer.  
 Oliver Russell Smith, Socorro, N. M. Assistant professor of mathematics and engineering, New Mexico School of Mines.  
 Bertha Spohr, Peoria, Ill. Director domestic economy, Bradley Polytechnic Institute.  
 Andrew B. Symms, R. F. D. No. 4, Atchison, Kan. Farmer.  
 Cora Thackery, Valentine, Neb. Teacher.  
 Harriet Emerson Thackrey, Valentine, Neb. Clerk in county treasurer's office.  
 Henry Marsden Thomas, 1209 Union avenue, Kansas City, Mo. Salesman Ferguson Implement Company.  
 Elsie Lucile Waters.  
 Fred Dorsey Waters.  
 Abner Davis Whipple, Marion, Ala. Instructor, Marion Military Academy.  
 Adelaide Francis Wilder, M. S., Manhattan, Kan. At home.  
 Josephine Hannah Wilder, M. S., Manhattan, Kan. Clerk.  
 Frank Yeoman, 501 and 502 Massachusetts building, Kansas City, Mo. Lawyer.  
 Frederick Zimmerman, Kirksville, Mo. Manager of dairy herd.

## 1899.\*

Bonnie Frances Adams, Cheyenne Wells, Colo. Teacher.  
 Morrison Carpenter Adams, Cleburne, Kan. Teacher.  
 Melvia Fairetta Avery, Manhattan, Kan. Teacher.  
 Albert Edwin Blair, 517 Polk street, Topeka, Kan. Continental Creamery Company.  
 James Courtney Bolton, Paxico, Kan. Farmer.  
 Joseph Abbott Butterfield, Success, Kan. Carpenter.  
 Willit Ramson Correll, Overbrook, Kan.  
 Ernest Lerner Cottrell, Wabaunsee, Kan. Farmer.  
 Alfred Burton Dille, Edgerton, Kan. Farmer.  
 Francis Joseph Habiger, Bushton, Kan. Wheat-grower and stock-raiser.  
 John George Haney, Hays, Kan. Superintendent Fort Hays Branch Experiment Station.  
 John Andrew Harvey, Junction City, Kan. Farmer.  
 Grace Edna Hill, Cleburne, Kan. Teacher.  
 Hiram Adsit Holzer, Pittsburg, Kan. Draughtsman for Santa Fe railroad.  
 Charles Clifford Jackson, Westmoreland, Kan. Stock-raiser.  
 Fred Emanuel Johnson, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Harry Wallace Johnston, Wichita, Kan. C. R. I. & P. telegraph operator.  
 Lot Parker Keeler, Seattle, Wash. Carpenter.  
 John Martin Kessler, 1133 O street, Lincoln, Neb. Gardener and florist, and graduate student Kansas State Agricultural College.  
 Albert Thomas Kinsley, M. S., Manhattan, Kan. Assistant in veterinary science, Kansas State Agricultural College.  
 Frank Elmer LaShelle, Clay Center, Kan. Teacher and printer.  
 Christian Dagobert Lechner, Morganville, Kan. Carpenter.  
 Ross Long, 601 Kansas avenue, Topeka, Kan. Lawyer.  
 Louisa Mary (Maelzer) Haise, Russell, Kan. Housewife.  
 Kate Anna Manly, Manhattan, Kan. Teacher.  
 Claud Masters, Hillsdale, Kan. Druggist.  
 Robert Burtice Mitchell, Fort Dade, Port Tampa, Fla. Second lieutenant company E, Fortieth U. S. volunteers.  
 Jennie June (Needham) Carter, Lane, Kan. Housewife.  
 Roscoe Townley Nichols, 2438 Indiana avenue, Chicago, Ill. Student Northwestern University.  
 Fanny Gertrude Noyes, Wabaunsee, Kan. At home.  
 Harry Delphos Orr, 2529 Indiana avenue, Chicago, Ill. Student Northwestern University, and graduate student Kansas State Agricultural College.  
 George Washington Owens, Tuskegee, Ala. Professor of agriculture and dairying.  
 Carrie Vashiti (Painter) Des Marias, Meade, Kan. Housewife.  
 Ella Emerson Peck, Lexington, Okla. Teacher.

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Anna C. Pfuetze, Olathe, Kan. Teacher of household economy in institution for deaf and dumb.  
 Andrew Pottorf, Riley, Kan. Farmer.  
 Mary Bly (Pritner) Lockwood, 161 High street, Middletown, Conn. Housewife, and student Wesleyan University.  
 Otto Independence Purdy, El Reno, Okla. Associate editor *Daily American*.  
 Delmer William Randall, Manhattan, Kan. Mail carrier, rural route, and graduate student Kansas State Agricultural College.  
 William Harry Roberts, Perry, Okla. Principal of schools.  
 Frank Sessions Shelton, Cape Nome, Alaska. Bookkeeper.  
 Louisa Mary Spohr, Chicago, Ill. Student St. Luke's Training School for Nurses.  
 Annie Louisa Streeter, Milford, Kan. At home.  
 Nellie Towers, Manhattan, Kan. At home.  
 Otho Sprague True, Vera, Kan. Farmer.  
 James Otis Tulloss, Sedan, Kan. Clerk.  
 William Guy Tulloss, Rantoul, Kan. Farmer.  
 George Franklin Wagner, Enterprise, Kan. Farmer.  
 Mary Lana (Vaughn) Smith, 7503 Sunnyside avenue, Green Lake addition, Seattle, Wash. Housewife and journalist.  
 Charles Bernard White, Monument, Colo. Farmer.  
 Nannie Elizabeth Williams, —, Mo. Stenographer.  
 Alexander George Wilson. Died in 1902.  
 Frederick Otto Woestemeyer, Lebanon, Tenn. Student Cumberland University.

## 1900.\*

Elizabeth Jane Agnew, Manhattan, Kan. Assistant in domestic science, Kansas State Agricultural College.  
 Elizabeth Edna (Asbury) Derr, Topeka, Kan. Housewife.  
 Effie Elizabeth (Bailey) Foltz, Zeandale, Kan. Housewife.  
 Alvah I. Bain, Marysville, Kan. Farmer.  
 Harry H. Bainer, R. F. D. No. 1, Pomona, Kan. Creamery man.  
 Charlotte Almira Berkey, Louisburg, Kan. Teacher.  
 John Harold Blachly, Manhattan, Kan. Mechanic.  
 Minerva Blachly, Manhattan, Kan. Bookkeeper in secretary's office, Kansas State Agricultural College.  
 Zina Leigh Bliss, Washington, D. C. Bureau of forestry, United States department of agriculture.  
 Fred Winchester Bobbitt, Linn Creek, Mo. Civil engineer.  
 Lillie Grace Bolton, Paxico, Kan. Graduate student Kansas State Agricultural College.  
 Prudence Dell Broquet, Greeley, Colo. Student Colorado State Normal School.  
 Nellie (Burtner) Sargent. Died in 1901.  
 Clarence Asa Chandler, Argentine, Kan. Teacher and fruit-grower.  
 Frederick Waldemar Christensen, Mariadahl, Kan. Farmer.  
 Ernest Mansel Cook, 1008 Mechanics street, Emporia, Kan. Student Kansas State Normal.  
 Charles McClain Correll, Manhattan, Kan. Teacher.  
 Jennie Maude Currie, 906 Madison street, Topeka, Kan. At home.  
 Harry Leroy Dern, Kingman, Kan. Teacher.  
 Homer Derr, Topeka, Kan. General offices Santa Fe railroad.  
 Mary Alberta (Dille) Hulett, Kirksville, Mo. Housewife.  
 Robert Edward Eastman, 224 Hazen street, Ithaca, N. Y. Student of agriculture, Cornell University.  
 Jennie Edelbute, Keats, Kan. At home.  
 Eugene Emrick, Pittsburg, Kan. Collector for L. B. Price & Co.  
 Josephine Finley, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Harry Verne Forest, Thayer, Kan. Draughtsman.  
 George Ogden Greene, Manhattan, Kan. Assistant in horticulture and graduate student, Kansas State Agricultural College.  
 Hermann Haffner, Junction City, Kan. Florist.  
 Gustaf William Hanson, 1225 East Murdock street, Wichita, Kan. Machinist.  
 James William Harner, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Daisy Gladys Hoffman, Chicago, Ill. Student.  
 Walter Fisk Lawry, 1416 Chemical bldg., St. Louis, Mo. Draftsman for Maule, Hanna & Co.  
 Amanda Culp McCarty, Mountain Grove, Mo. Instructor in music, Mountain Grove Academy.  
 N. Ollie McCurry, Milo, Kan. At home.

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George G. McDowell, Elkton, Colo. Miner.  
 Roland McKee, Blue Rapids, Kan. Farmer.  
 Nettie McLaren, Altoona, Kan. At home.  
 Charles Dudley Montgomery, Paloalto, Cal. Student Leland Stanford Jr. University.  
 Fred Byers Morlan, White Rock, Kan. Farmer.  
 Andrew Edward Oman, Winkler, Kan. Teacher.  
 Kate Paddock, Manhattan, Kan. Instructor in domestic art and graduate student, Kansas State Agricultural College.  
 Joseph Lloyd Pancake, Tully, Kan. Stock-raiser.  
 Albert William Parrack. Died in 1901.  
 Edith Perkins, box 138, South Pasadena, Cal. At home.  
 Elenore Perkins, box 138, South Pasadena, Cal. At home.  
 Paul du Chaillu Piersol, Manhattan, Kan. Mechanic.  
 Luther Eugene Potter, Grand Junction, Colo. Superintendent of farm at Indian school.  
 Clara Spilman, Manhattan, Kan. Teacher, and graduate student Kansas State Agricultural College.  
 Mabel Stewart, Neosho, Mo. Teacher.  
 Stella Stewart, Council Bluffs, Iowa. Teacher in institution for deaf.  
 Fayette Charles Sweet, Burlington, Kan. Farmer.  
 Cora Edith Swingle, New York city. Student Teacher's College.  
 Dean Brett Swingle, Washington, D. C. Scientific aid, U. S. department of agriculture.  
 Barton Thompson, Garrison, Kan. Graduate student Kansas State Agricultural College.  
 Laura Helen Trumbull, Manhattan, Kan. Teacher, and graduate student Kansas State Agricultural College.  
 Jessie May Wagner, Enterprise, Kan. At home.  
 Luther Watts Waldraven, Randolph, Kan. Farmer.  
 Kate Elizabeth Zimmerman, Santa Fe, N. M. Instructor in sewing, Presbyterian mission school.

#### 1901.\*

Delmer Akin, Manhattan, Kan. Student Kansas State University, and graduate student Kansas State Agricultural College.  
 Cyrus Norton Allison, Florence, Kan. Dental student.  
 Loua Adelle Blachly, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Harry S. Bourne, Delphos, Kan. Farmer.  
 Charles J. Burson, Niotaze, Kan. County surveyor.  
 Howard Frank Butterfield, Ackley, Iowa. Instructor in manual training school.  
 Edwin Charles Cook, Oakley, Kan. Farmer.  
 Ina Foote Cowles, Lawrence, Kan. Instructor in Haskell Institute.  
 Trena Dahl, Webber, Kan. At home.  
 Fannie Rachel Ellen Dale, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Herman August Dieball, Albuquerque, N. M. Insurance agent.  
 Edgar Willis Doane, Paloalto, Cal. Student Leland Stanford Jr. University.  
 Otto H. Elling, Tampa, Okla. Farmer.  
 Valentine Meacham Emmert, Blue Rapids, Kan. Farmer.  
 Rainey Faris, Sixth and Easton streets, Alton, Ill. Draftsman for Western Cartridge Company.  
 Harry Haines Fay, Wilsey, Kan. Farmer.  
 Fred Fockele, Le Roy, Kan. Cashier in bank.  
 Louisa Gerteis, Derby, Kan. Teacher.  
 Maud Hart, Elvaston, Ill. At home.  
 Fred Willis Haselwood, Paloalto, Cal. Student Leland Stanford Jr. University.  
 Minnie Howell, 1725 Topeka avenue, Topeka, Kan. Instructor in domestic science, industrial institute.  
 Edith Huntress, Manhattan, Kan. At home.  
 Louis Berten Jolley, Manhattan, Kan. Student Chicago Homeopathic Medical College.  
 Helen Knostman, Manhattan, Kan. Instructor, Kansas State Agricultural College.  
 Daniel Ladd, Manhattan, Kan. Carpenter.  
 Emma Elizabeth Lock, Manhattan, Kan. Teacher.  
 Harvey McCaslin, Paloalto, Cal. Student Leland Stanford Jr. University.  
 Madge Ruth McKeen, Manhattan, Kan. Instructor and graduate student, Kansas State Agricultural College.  
 John A. McKenzie, Oswego, Kan. Farmer.

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George Martinson, Paloalto, Cal. Student Leland Stanford Jr. University.  
 Walter E. Mathewson, Manhattan, Kan. Assistant in chemistry and graduate student, Kansas State Agricultural College.  
 Emma Maude Miller, Milford, Kan. Teacher.  
 Margaret Jane Minis, Manhattan, Kan. Assistant librarian and graduate student, Kansas State Agricultural College.  
 Clarence William Morgan, Phillipsburg, Kan. Teacher and farmer.  
 Eugene Lawrence Morgan, Phillipsburg, Kan. Teacher and farmer.  
 Ruth Atwill Mudge, Manhattan, Kan. Instructor and graduate student, Kansas State Agricultural College.  
 Jessie May Mustard, Manchester, Kan. Graduate student Kansas State Agricultural College.  
 Martha Nitcher, Manhattan, Kan. Assistant in office of farm department, Kansas State Agricultural College.  
 John H. Oesterhaus, Holton, Kan. Clerk.  
 Carrie Bell Oneel, Lowemont, Kan. At home.  
 Helena Maude Pincomb, Pittsburg, Kan. Instructor in domestic art in Pittsburg high school, and graduate student, Kansas State Agricultural College.  
 Bryant Poole, R. F. D. No. 2, Manhattan, Kan. Farmer.  
 Leroy Rigg, Marvin, Kan. Farmer.  
 William Stephen Sargent, Casper, Wyo. Foreman of sheep ranch.  
 Maude (Sauble) Rogler, Matfield Green, Kan. Housewife.  
 Charles A. Scott, Washington, D. C. Assistant in bureau of forestry, United States department of agriculture.  
 Anna Louisa (Smith) Kinsley, Manhattan, Kan. Housewife.  
 Adelaide Strite, Ogden, Kan. Teacher.  
 Anna Odette Summers, Waterville, Kan.  
 Lucy Sweet, Santa Cruz, Cal. At home.  
 Perrin K. Symms, R. F. D. No. 4, Atchison, Kan. Farmer.  
 Estella Mae Tharp, Arkansas City, Kan. Teacher.  
 Helen Castle True, Emporia, Kan. Student Kansas State Normal School.  
 Harry Castle Turner, Rock Creek, Kan. Teacher.  
 Florence Helen Vail, Manhattan, Kan. At home.  
 Mary Caroline Wagner, Manhattan, Kan. Graduate student Kansas State Agricultural College.  
 Eleanor Mary White, Newton, Kan.  
 Katharena Winter, Manhattan, Kan. Clerk.  
 Lucie Joan Wyatt, Westmoreland, Kan. Teacher.  
 Henry Theador York. Died in 1902.

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*SUMMARY.*

The number of graduates up to 1902 is 815, of whom 309 are women. Graduates previous to 1877 pursued, with two exceptions, a classical course, and received the degree of bachelor of arts. Since 1877, all have received the degree of bachelor of science, after a four-year course in the sciences, with good English training.

Of the 506 men, 22 are deceased, and the remainder are reported in the following occupations:

Farmers and stock-raisers.....	98
Fruit-growers, nurserymen, and gardeners.....	13
Professors and instructors in colleges.....	36
Superintendents of agricultural experiment stations.....	5
Assistants in agricultural experiment stations and agricultural colleges.....	8
In United States department of agriculture.....	12
In United States government civil service.....	7
In military service.....	8
In postal service.....	11
County superintendent of public instruction.....	1
Superintendents and teachers in public schools.....	39
Teachers in Indian schools.....	4
Graduate students Kansas State Agricultural College.....	14
Students in other institutions.....	20
Physicians and students of medicine, druggists, and dentists.....	34
Lawyers.....	29
Ministers and secretaries of Y. M. C. A.....	12
Journalists.....	22
Architects and builders.....	10
Civil, electrical, mining and mechanical engineers.....	10
Mechanics.....	18
Manufacturers.....	7
Miners.....	5
Telephone and telegraph operators and managers.....	4
Officials and official clerks.....	4
Clerks and bookkeepers.....	19
Merchants.....	26
County and state officials.....	12
Bankers and cashiers.....	11
Commercial travelers.....	8
Creamery men.....	6
Agents.....	6
Other professional men.....	3
Unknown.....	14
Total.....	536
In two occupations.....	52
	484

Of the 309 women, 14 are deceased, and the remainder occupied as follows:

Housewives.....	114
Teachers in public schools.....	47
Teachers of domestic science and domestic art.....	22
Professors and instructors in colleges.....	7
Teachers of art and music.....	7
Physicians.....	2
Students in other institutions.....	5
Graduate students Kansas State Agricultural College.....	17
Instructors and assistants in agricultural colleges and experiment stations.....	8
Secretary of Kansas State Agricultural College.....	1
Librarians and assistant librarians.....	4
Nurses.....	7
Bookkeepers, stenographers, and clerks.....	15
Milliners and dressmakers.....	3
Journalists.....	4
At home.....	35
Unknown.....	5
Farmer.....	1
In United States department of agriculture.....	1
With opera company.....	1
Total.....	306
In two occupations.....	11

## *Index.*

	PAGE
Admission, Terms of .....	91
Agriculture Course .....	32, 33
Agriculture .....	42
Algebra .....	62, 76
Apprentice Courses.....	88
Architecture .....	53
Assistants .....	6, 11
Attendance, 1900-'01 .....	127
Attendance, 1879-'02 .....	127
Bacteriology.. ..	78
Battalion.....	12, 68
Board of Instruction.....	5
Board of Regents.....	4
Botany.....	43
Buildings .....	17
Business Directions.....	96
Calculus .....	63
Calendar .....	3
Chemistry.....	46
City Certificates.....	92
College Band.....	13
College Battalion.....	12
Cooking.....	51
County Diplomas.....	91
County High Schools.....	92
Courses of Study.....	27, 28
Dairy Husbandry.....	49
Dairy Short Course.....	80
Degrees .....	25
Descriptive Geometry.....	53
Domestic Art.....	52
Domestic Science Course.....	34, 35
Domestic Science.....	51
Domestic Science, Short Course.....	85
Drawing.....	53
Dressmaking .....	52
Earning One's Way.....	95
Economics.....	59
Electrical Engineering Course.....	40, 41
Electrical Engineering.....	74
English Language and Literature.....	54

	PAGE
Entomology .....	58
Examinations .....	93
Expenses .....	96
Experiment Station .....	10, 21
Extended Course .....	24
Faculty .....	5
Farmers' Institutes .....	20, 96
Farmers' Short Course .....	82
Financial Exhibit .....	16
Floriculture .....	61
General Duties and Privileges .....	94
General Information .....	91
General Science Course .....	36, 37
Geology .....	58
Geometry .....	63
Graduate Courses .....	25
Graduates .....	128
Grounds and Buildings .....	17
History and Resources .....	15
History and Economics .....	59
Horticulture .....	59
Hospitants .....	92
Hygiene .....	51, 78
<i>Industrialist</i> .....	76, 96
Industrial Training .....	23
Library .....	18, 20
Literature .....	56
Logic .....	73
Mathematics .....	62
Mechanical Engineering Course .....	38, 39
Mechanics .....	64
Military Training .....	68
Millinery .....	52
Music .....	68
Objects .....	20
Occupations of Graduates .....	144
Oratory .....	72
Other Officers .....	9
Outline of Instruction .....	42
Philosophy .....	73
Physical Training for Women .....	73
Physics .....	74
Physiology .....	76, 78
Preparatory Department .....	75
Printing .....	76
Psychology .....	73
Regents .....	4

## THIRTY-NINTH ANNUAL CATALOGUE.

147

	PAGE
Resources .....	15
Sewing .....	52
Short Courses .....	79
Special Courses .....	24
Student Assistants .....	11
Students .....	97
<i>Students' Herald</i> .....	76, 77
Substitutions .....	94
Summary of Attendance .....	127, 144
Terms and Vacations .....	3
Terms of Admission .....	91
Veterinary Science .....	78
Woodwork .....	66
Y. M. C. A. ....	89
Y. W. C. A. ....	90
Zoölogy .....	58